

GREAT GIFTS: 75 TOOLS AND DIY GADGETS STARTING AT \$3

DECEMBER 2005

This Old House

reface kitchen
cabinets in
a weekend (p. 65)

quick fixes for
nail holes

install a classic
mantel

WHAT'S NEW IN
WINDOWS
better materials,
bigger savings

look
inside
for

25
SECRET
SOURCES

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& more

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AOL KEYWORD: THIS OLD HOUSE



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HOME DÉCOR TAKES CENTER STAGE WITH NEW HOME THEATER TECHNOLOGY



WITH TODAY'S ELEGANTLY DESIGNED HOME THEATERS, you don't have to choose between having an amazing audio-visual system and a beautiful home—you can have both. The racks of electronic equipment and old-fashioned wiring, essential just a decade ago, are now a thing of the past. Thanks to sophisticated technology, you can now find home entertainment systems—like the Bose® Lifestyle® 48 DVD home entertainment system—that offer rich, life-like sound minus the bulky components. With sleeker, sleeker equipment, you have more flexibility when deciding where you want to place components and speakers. And with new wireless technology you can expand from room-to-room seamlessly.

It used to be that big sound meant big equipment. But no more. Now you can have warm, rich music in every room of your home with speakers that fit into the palm of your hand and are heard, not seen. These Bose speakers can provide much greater flexibility in terms of where you place them, as Bose has developed a technology that automatically adjusts the sound coming from each speaker to fit the unique acoustics of a room.

You also gain space with the integrated systems that have "all-in-one" simplicity. One unit contains your DVD/CD player, AM/FM tuner and controls the entire system. Systems that allow you to digitally store CDs help cut down on the clutter of CDs and cases. The media center that runs Bose® Lifestyle® systems, roughly the size of a laptop, can digitally store up to 340 hours of music and even learn the kind of music you like and makes selections for you. And with Bose® Lifestyle® systems, one remote operates everything in the room, the Bose system, your TV, your cable or satellite box.

Besides saving space, many new home theater systems can now be linked wirelessly. Rooms are connected to the main "hub" via wires. Just make sure to choose a system with a powerful remote that lets you control your music from almost anywhere—through walls and floors. With these space-saving technologies, you can concentrate on how things will look without worrying about how things will sound.

Technical Direction

SIZE:

Bose® Jewel® Cube speakers are only 4 1/2" high blending easily into a room's décor.

STYLE:

Bose AcousticPhase® audio calibration technology automatically adjusts the sound coming from each speaker to give you theater-like sound no matter where speakers are placed. It adjusts for nearby objects such as bookshelves and bookcases.

INTEGRATION:

The Bose Lifestyle® media center integrates most electronics and devices in one unit.

WIRELESS:

Bose® Lifestyle® ALS home-wide wireless audio link, works with the Lifestyle® media center so you can enjoy music all over your home without room-to-room wiring.

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It learns what kind of music you like. You can digitally store up to 340 CDs in your Lifestyle® 48 system, giving you easy access to your favorite music. And proprietary Bose technology learns about your taste, so it can instantly choose music for you.

It can expand to where you want sound. The Lifestyle® 48 system lets you enjoy your music collection throughout your home without the need to run wires between rooms. An advanced Bose controller gives easy access to your entire CD collection in the palm of your hand—in any room.

Experience the difference for yourself. No other home theater system can bring your favorite movies, sports, TV shows and music to life with the rich, lifelike sound of a Lifestyle® 48 system. Because no other system has the same intelligent Bose technology inside. *Exclusive. How we sound is "Product of the Year."* Hear one for yourself, and we believe you'll understand why Bose is the most respected name in sound.

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imagination at work

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december 2006 | CONTENTS

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Without Ambilight.

With Ambilight.



You'll never go back to ordinary TV.

Philips Flat TV with Ambilight. It only makes sense to get the most out of your television so you'll never want to turn off the world's first and only Ambilight feature. By analyzing the incoming TV signals, the Ambilight system projects a background color to fill your room and your eyes with the dominant color on your TV screen. The High Definition Flat TV with Ambilight from Philips - the next step in the evolution of television.

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2006 J.D. Power and Associates
Best in Class Award



This Old House

this month online

Watch a special TV special on YouTube: The Builders

Tune In to TON TV

The new series at The Old House is well underway and includes changes and happenings of the Cambridge house. Reclusive dog and his double are expected to be featured. Stay tuned to find out what's in it for you and the house's new owners.



Green House

How to build a new house. Repurpose some materials in a house you're in. Buy a house you're in. Buy a house you're in.



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Online Poll

What's the best way to make a house a better place?



This is a poll of the most popular ways to make a house a better place.

Shortcuts

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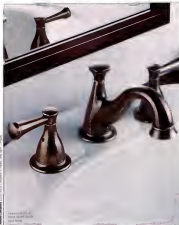
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Lockwood™ Bath Collection — Where style meets beauty. Looking for a bath faucet collection that brings the eye between traditional and contemporary? That's looking at it — the new Lockwood Bath Collection. This exciting new bath collection integrates the popular design with a new twist, especially in our new Delta® WaterSense®. Choose from a wide range of Lockwood products to fit your style, including a new virtual showerhead with optional goose-neck shower as in for a luxurious showering experience. Freshen the look of your bath with coordinating accessories and lighting. All available in Chrome, Stainless Steel, and Oil-Rubbed Bronze. Call 1-800-452-1234 (TODAY) or visit www.deltafaucet.com



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contributors



Photographer **Edna Larsen** works on her "25 Secret Sources" feature this month (page 100) and a featureless story, one of the creativity and the endless work ethic that makes places like Portland and Secondhand Rose so vital. Larsen says the environments the documents have fascinated her—and brought out her inner artist. "Whatever the beauty is that I see, I would only hope I'd be able to share that with people," she says. Larsen has also contributed to *Field & Stream* and *Time*. She lives in Hoboken, New Jersey.

Joe Hunt-Wajszuk develops a passion for home improvement advice and the skills he acquired then helped him launch his impressive home-selling career. This month, we draw on Hunt-Wajszuk's years of know-how to describe how certain moments always function and to convey how proud they truly are ("Blissful Entry" page 58). "Some people might be reluctant to put them in their homes, and that's the worst thing that could happen," he says. Hunt-Wajszuk, once an editor at *American Woodworker* (Susan Postaville, Wisconsin, and is the author of the soon-to-be-released fourth volume in a series of textbooks called *Getting Started in Woodworking*.



Peter Vitale, who shot the photographs of the 200-year-old Santa Fe adobe house featured this month ("The House is Mud" page 72), has had plenty of practice capturing the house's divine charm. "I've known four owners of that house," he says. "It has a life of its own." In fact, Vitale has made something of a career out of documenting the region's rich southern history, having decorated several books on Southwestern life with his photos, including *Southwest Style* in 2009. Vitale, who is also a photographer for 25 years, also shoots for *Venice*.



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We talked to the answering machine
Your mom, she'll call back
Don't bother with a word yet either
Just dim the lights
Take off your shoes
Relax
Oh, and that ringing from above the refrigerator?
We don't think you'll be hearing that tonight

YAMAHA

Happy home.

Take your mind off your problems with the new Yamaha digital satellite projectors, which provide music, video, and internet sound from a single component. Or the MusicCAST system for true instant access to all your favorite music. Or any 1000 in this house is my friend. Then there's the R1 V4500 - the first 10" Cinema High Definition LCD that runs with HD audio compatibility. HD! (High Definition) video, and 17400 subpixels to give you the most detailed picture ever. And don't get me started. It's a family of products all working together in beautiful harmony. Find all of it here from Yamaha. So sorry about the "B" disclaimer.

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letter FROM THIS OLD HOUSE

Unburying Treasure

A COUPLE'S HANDS I took a house tour of some 19th-century homes in my town, a few full of materials and craftsman's tools. I saw many a fine example of their history and much skill, thanks to a set of figures removed from the modern makers, though, who had been set in their places. Only in our own minds, we see the figures as they were, only in our own minds, we see the figures as they were, only in our own minds, we see the figures as they were.

Maybe you have that same feeling. I grew up with it, learned the ropes with a working set of carpenter's tools, and then with it now in the kitchen I still haven't found the tools to remodel. And it's fine. But these carpenters could clearly find some thing special. Maybe they just didn't know where to find it.

Take out the wood that was. This month, our editors split the account of a house in the know with below-the-surface sources for everything from architectural work in vintage to modern materials and models. "15 Years Later" (page 88) is full of hidden finds, one of a kind, and just plain amazing stuff to make your house a home like no other.

To add our secret sources to your own list. Before I worked in TONY, we only saw one thing, but it's provided me with a few more, some power sawing machine and some topped with a bit of hardware for saving up doing and a new life work (a little more, but great being around near a parking bench). Okay, so my source does not include top-down in a Dumpster on a Saturday morning. You can laugh—my family own one. That's okay. "Class under the house" (page 90) is full of old secrets, I just searched 10-foot lengths of base molding made from plaster. The good stuff. In fact, you pretty much can't find that kind of trim at any hardware.

Scrapped, stained, and finished with a nice clear coat, the full details will look great in my living room. And a little more to go. I know how just what to go to find the perfect shade of color paint for the walls. And when the house is all set, I'll start to get replacing. And when the house is all set, I'll start to get replacing. And when the house is all set, I'll start to get replacing.

What her it's this kind of unique information in our cover story, or the tips and tricks of the trades you find every month in our Homeowner's Handbook and Upkeep columns, you can count on these pages to be packed with useful, special stuff. No Dumpster-diving required.

Scott O'Sullivan
SCOTT O'SULLIVAN
EDITOR



Only in TONY. On the floor of all things with our state-of-the-art. Our entire Secret Sources list of products and services begins on page 88.

Unique information, tips, and tricks of the trade—you can count on This Old House to be packed with useful, special stuff.



HGTV'S RESTORE AMERICA BRINGS BACK DETROIT'S BRUSH PARK, "LITTLE PARIS OF THE MIDWEST"

ONE OF THE MANY EFFORTS MADE POSSIBLE BY RESTORE AMERICA

In partnership with the National Trust for Historic Preservation, HGTV's Restore America philanthropic program renovates, restores and preserves historic landmarks to revitalize local communities and encourage community restoration efforts everywhere. Next, they will tackle Detroit's Lusk Moore House—a golden example of the extravagant Victorian created during the "Modern Downtown Gothic" period.

The Moore house was built in 1885 in Brush Park, just north of Detroit's central business district. Once a premiere neighborhood also known as "The Little Paris of the Midwest," the area used to contain large and elaborate mansions. In the 1920s and 1930s, apartment buildings changed the neighborhood landscape. Sometimes outfitted from formerly single family mansions, many elegant homes were demolished to make way for new apartment high-rises. This new division suddenly created a new community fabric brought about by the status of wealthy homeowners and the arrival of factory workers, ethnic groups and elderly apartment dwellers.

By 1960, Brush Park substantially deteriorated due to economic circumstances, and the Moore House suffered the brunt of the neglect brought upon the remaining mansions in Brush Park. Since initiatives taken in 1990, the City of Detroit has campaigned aggressively to revive its area premiere homes and neighborhoods like the Moore House and Brush Park. It also provides historically influenced infill of the vacant land left by demolition.

Today, thanks to the partnership between HGTV and the National Trust for Historic Preservation, the Moore House will be restored to resemble its past splendor and will be divided into six modern condominium units that will serve the Brush Park community.



ABOUT RESTORE AMERICA

HGTV's Restore America program, in partnership with the National Trust for Historic Preservation, saves national landmarks across the country by intervening buildings, which would otherwise be lost, into homes for families to live.

Starting in Indianapolis and going all the way to San Francisco, there will be 12 locations transformed across the country this season. These sites were chosen because of their architectural, historical or cultural significance to their community, the financial and management capacity for completion, and the overall quality and credibility of the project.

Find out what you and your family can do to help the Lusk Moore House in Detroit, MI or other sites in your community at HGTV.com/restoreamerica

PROUDLY SUPPORTED BY BANK OF AMERICA, LOWE'S AND MARVIN WINDOWS WHO ARE ALSO COMMITTED TO THE CAUSE OF RESTORATION



"The French dip sandwich was invented in my living room."



Thanks to HGTV's Restore America, this historic office building, containing the oldest continuously running restaurant in Southern California, is being saved and transformed into residential homes just like yours. And so are many other historical landmarks across the U.S. Find out what you and your family can do to help your community at HGTV.com/restoreamerica



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SUBARU **B9 TRIBECA**
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INFORMS EVERYTHING THESE DAYS FROM
REINVENTING TO BELIEVING, AND LET THOSE
HOT TRENDS INSPIRE YOUR NEXT HOME PROJECT.

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Turning old to new again when an old bank
building or other non-residential building transforms
into a home for open-air architectural exhibits
is the goal.

GREEN ARCHITECTURE >

Sustainable, energy-efficient design is gaining major
ground, even to ecology urban green developments.
Plus, ecological and recycled building materials are
finding their way into everything from city-based
high-rises to weekend-made-of-knives car modifications.

BLISS BUILDINGS >

Images 1 and 2 will come. With the addresses in the
listing, address and zip codes buildings architects
can now create maps, diagrams and virtual
tours. Features a future: add the word "find".

PREPARE HOUSING >

Archie and his wife and wife. Experienced pairs go
together in a variety of ways to build sleek,
informal homes that can be used in individual
ways. It's like an advertisement with custom features —
each author seems to start — to create your ultimate
dreamhouse.

TECHNOLOGICALLY-INFORMED ARCHITECTURE >

Next generation buildings "talk" to themselves
before anyone touches them. For example, in just
enough light to make them comfortable, they can respond
without you even having to adjust the thermostat.

Think. Feel. Drive.



mail



Armed With Knowledge

After finishing the October issue on
"How to Hire the Best," I want to
thank you for the endless supply
of articles that teach readers where to start
with a project. This Old House is the only publi-
cation I've encountered (and believe me, I've
purchased them all) that offers more than
the problems, the areas with which how to solve
quality contractors, what questions to ask, and
what shows we can anticipate during our proj-
ect (along with the best options to choose). I
find each issue so helpful that I've started giving
TOH subscriptions as gifts.

My husband and I are planning a major re-
model of our broken-up, half-century-old
house in a couple of years. To prepare ourselves,
we've been clipping articles and pictures month
after month from our TOH magazines. I feel
confident that because of the knowledge we've
gained from those pages, we'll finally turn this
house into our dream house.

WENDY KOTER, PLUMMER, VA

Eye Safety in the Old Days

The nail salon for the turner in the lid of a
mechanic's toolbox ("Treasured Objects," Janu-
ary/October) was not for vanity's sake. It was
for the removal of metal chips from the re-
turned's eye. Before the days of motorized
combustion safety glasses, this was all too
common occurrence.

MICHAEL MARCH, LANCASTER, PA

The editors reply: That is a lovely explanation
we can accept at our research, but there is
also a lot of original work in our hands from
use in keeping well-groomed there is the legend
that it was meant for the "burying" money
behind—whether the burial intended was literal
or a metaphor for a Saturday in gift shop.

Address mail to editors: The Old House magazine,
200 Avenue of the Americas, New York, NY 10013.
Or e-mail us at editor@oldhouse.com.
Please include your full name, address, and
phone number. Published letters will be edited
for clarity and length and may be used in other media.

Squirrels and Rabbits

I've a big file of all your articles, but I need to
correct you on squirrels and rabbits ("Whose
House Is It Anyway?" October). I worked as a
veterinary technician for 20 years. Having done
research for a paper on the subject in college
and double-checking it now, the same info is
still out there. Squirrels are very unlikely to
have rabies. I would be concerned if I had been
acting strangely, but to my knowledge there
has not been a documented case of rabies in
any recent (squirrels included) except for the
groundhog or woodchuck. But I must add
over I do. I want squirrels in my attic.

ELIZABETH CARROLL, DVM-C, PHD-CM
ASSISTANT VETERINARY MEDICAL, PLAINFIELD, NJ

Appreciating Vintage Stoves

Your article on stoves ("A Warning Word," Oc-
tober) was very timely—we've been debating
about whether to replace my father's grand-
parents' stove or buy a new one. And that article
decided it. We like reading it a lot.

DIANE HEDGECOCK, LANCASTER COUNTY, PA

Creative Reuse for Glass Knobs

I have collected vintage door knobs. A Clear
Choice for Knobs ("Salvage," October) and
wanted to share another use I found for them
besides on doors. With inspiration from my
interior designer, I realized local flea markets
to gather 30 different knobs. I then had a color-
pencil mount them in boards and install them
over my dining room windows, and I hung be-
lievable drapery panels from the knobs. What a
contrasting piece they have become. We
can only wonder about their original owners?
Thanks for a great magazine!

DIANE HEDGECOCK, LANCASTER, NY

PHOTO: JAMES HARRIS



WE DIDN'T INVENT THE WHEEL.
BUT WE DID REINVENT WHAT SITS ON TOP OF IT.

Why build an ordinary SUV when you can create a whole new driving experience? Introducing the all-new
Subaru B9 Tribeca. With the punch of a 250-horsepower boxer engine, assistance of road-gripping Symmetrical
All-Wheel Drive and the safety of Vehicle Dynamics Control, it takes you where you want to go on 16 many
different levels. MSN Autos says, "The B9 Tribeca really shines in the driving department." Drive it once and
you'll agree, that is the end of the SUV as you know it, and the beginning of what it should be. subaru.com

SUBARU **B9 TRIBECA**

*Optional equipment shown.
The MSRP of Safety Air Bags, Side Curtain, 1st Row of Occupant

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» HOLIDAY Gift Guide

BY AMLEY HORNLE
PHOTOGRAPHS BY ROSA & ROSA

THIS GIFT-GIVING SEASON, we at *The Old Man* know you'd rather shovel six feet of snow than fight for a parking spot at the tool mall. So we did most of the legwork for you, assembling a list of tools for the breaking contractors, remodeling or home survival gear that no one should be without, and picking out some of the best new tools to add to your own toolkit. We've even found a substitute for the dreaded cable-knot sweaters. Best of all, you can pick up everything online or at the corner hardware store.

1 Kid's Tool Kit

Arm your future Diller (age 10 and older) with these lighter-weight, easier-to-grip tools and gain two extra hands on your next project.

12. **DELICIOUSLY FISH AND BIRDY**
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TIP "Consider the skill level of the person you are buying for and think about how much they will use it. And remember to buy the best tool you can afford to ensure quality and durability."
—Sam Sline
TCM general contractor

2 The Power Pack

The talent in both corded and portable power tools that will make you long to read the words "assembly required."

» SMALL SAWING

The just-released Skil 3400 rambles on talc-like sanders with a 2 1/2-inch disc to more compact than a standard 6-inch disc, so it can squeeze into tight corners and tackle materials on flat, nonvertical surfaces like woodwork. \$129; makere.com

» JIGSAW CHARGE

Starting this month all Skil power tools, including this 6 1/2-inch 32-volt cordless circular saw, will be equipped with the company's new SkilPack System, which offers 50 percent more run time. The batteries will also work with other Skil tools—and their new 30-minute charger says outlasting some in half. (See \$136; makere.com)

» BACKCUT

Rated a lightweight 9 1/2-volt cordless trimmer, the tool has a pivoting head that can follow the lead of a hand saw.

Backed by a 1/4-inch gun-shaped shank, it's only 6 1/2 inches long with less than 2-inch long shank.

» PRECISION CUT

Hitachi's new 12-inch sliding compound miter saw is designed to cut 90-degree angles in just one stroke. It also has an eye-level digital screen that displays miter and bevel calculations, accurate to half a degree. A laser guide lines up the blade with your pencil mark, so you can cut with confidence. \$199; hitachi.com

» BATTERY-LESS

The new 30-minute charger says outlasting some in half. (See \$136; makere.com)

» BACKCUT

Rated a lightweight 9 1/2-volt cordless trimmer, the tool has a pivoting head that can follow the lead of a hand saw.



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4 Workshop Innovations

Whether wholly new inventions or improvements on old-school tools, these are our picks for the latest problem solvers, clutter-busters and time-savers.

1. TONGUE

TOOTHROCK
Thanks to the PowerSource® Power Multiplier you'll never be dismayed by an overstuffed power strip again. With five flexible cords of varying lengths with sockets on the ends, you can plug in all of your corded tools at the same time. \$38, power.com

2. TWO-PIECE

SAWING
The item 14 Tiltwin is a 14-inch-plasma banner with two interchangeable steel base plates—one serrated for tight work and the other welded for framing—adjust and transfer over the job at hand. \$200, tiltwin.com

3. **SUPER WRENCH**
A dual-between a wrench and pliers, the 8-inch Blue Wrench has metal teeth that adjust to 11 angles (6 100° settings) of jaws and teeth. \$79, leggettandplatt.com

4. HEAVY-DUTY

It's the overwinding

shaking of the old 2-in-1 wrench's foot. The 10er has 10 in 1 Multi Toolworks: grips, removes paint, screws, pulls nails, opens bottles, serves beverages, and even paint rollers. \$12, shurline.com

5. **WIRELESS**
Clawed inside, the 10er's grip is made of plastic, so it's easy to grip and holds its shape so you can adjust your grip size. \$14, shurline.com

6. WIRELESS

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Arched mirror:
LEFT is suspended
from the window
ceiling above each
kitchen island sink.
Another mirror
is a closet pocket
door. **BELOW**



What They Did

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3. SAVED SPACE WITH SLIDING

DOORS. To keep open doors from jutting out into the long, narrow ramp, panel doors were installed. The elevator will slide it to give access to the dock.

4. BROUGHT THE OUTDOORS IN

Windows above the vanity sliding French doors to the deck, and a pair of skylights in the 12-foot circular ceiling bring light and views into the room. Organic materials—limestone walls, a gray honed stone counter top and shower walls, maple and mahogany woodwork, and a multicolor tile floor—freshen the space. Floors—also in the restrooms and

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SALVAGE

These carved
profile mantels
with mirrored
tops come from
a dismantled
1849 Colonial
Revival house in
Washington, D.C.

Carved for the Hearth

» Vintage wood mantels bring
warmth to a room with or
without a crackling fire

BY ANNE HUGHES
PHOTOGRAPHS BY ALLISON CONNER

Consider proportions
when shopping for a
salvaged mantel. A large,
ornate model
topped with a mirrored
overmantel is better
suited to a high-ceilinged
great room than a
snug bedroom.

THE FIREPLACE WAS LONG AGO RENOVORED—OBSCLETE as a primary home heating source, yet it remains a favorite gathering place. A flickering fire—wood or even gas—in comfort, as well as an occasion to sit back and relax.

But the hearth has a renewed because of the wooden mantel that typically frames it. A mantel serves not only as an architectural anchor to a room but as a functional shelf on which to display prized possessions. That's why a variety of them will grace the parlors, dining rooms, and bedrooms of old houses even when the fashions have been rolled over to dramatic drafts.

For every surviving example, of course, there are dozens that were torn from walls during midcent remodels. Luckily, many discarded examples have ended up in architectural salvage yards, where a homeowner can now buy them to recreate what may have been removed by a previous owner or to add period detail to a new house.

Before 1700, humble settler cottages had combination heating and cooking hearths topped with a heavy timber shelf to support the necessary shelve it. But by the early 1700s, fireplaces with decorative wooden mantels—mostly simple painted frames—were warming other common areas as well as bedrooms in colonial homes. Most ornate ones with bulging overmantels, pedimented caps, and putare carvings, which were inspired by European pattern books, could be found in urban mansions and sprawling country estates.

Throughout the 18th century, mantels were typically painted to hide the fact that

How to Strip Old Paint

Some of the paint on a salvaged mantel is bound to be lead based, so you'll need to use a chemical stripper (Sanding and heat guns release toxic lead dust and fumes.) Bob Reed, owner of the Stripping Workshop in Washington, D.C., recommends a water-based chemical stripper such as Berk Marine Paint & Varnish Remover. It works quickly and doesn't alter the wood's natural color or texture, as oil-based strippers can. Because the fumes are noxious, work outdoors and use a respirator. Strippers can also burn, so wear long sleeves, pants, chemical-resistant rubber gloves, and goggles. Spread a plastic drop cloth under your work table to catch the mess.

- 1) Brush stripper on small sections, moving in one direction. When the paint softens, it is ready for removal.
- 2) Gently scrape off paint, starting with details. For curved moldings, Reed uses a wood carving tool called a Skelby knife. A steel scratch and seal brush (bristles made below work best) removes Use a putty knife on flat surfaces. (The ribbed sections, apply as many coats of stripper as needed.)
- 3) Wipe wood with a sponge soaked in mineral spirits. This removes any residue (in addition to the stripper).
- 4) Let dry, sand with 150-grit paper to give wood enough tooth to hold a new finish. Check with your local hazardous-waste office for how to safely dispose of the paint-filled drop cloth.

they were made with scrapwood or with cover-then-cut material. A single-pipe mantel, for instance, might have been decorated with applied flower motifs made of a plasterlike substance called gesso. It was also the fashion in the late 1700s to have fireplaces with a paneled wood-grain pattern, says Elizabeth Crowley, a professor of architectural history at Northeastern University in Boston.

Refractory mantels (heavily painted and stuccoed) were also popular during the Victorian era—about 1860 to 1900—when art nouveau companies offered affordable mass-produced versions that mimicked the handcarved designs previously available only to the rich. Middle-class homes of the time featured high-style mantels made of brick or tile with intricate carvings in the legs and mushroomed chimneys on the overmantel.

By the late of the 19th century, the pared-down aesthetic of the Arts and Crafts movement streamlined mantel designs, and clear finishes were used to emphasize the grain of quarter-sawn oak. "The visual interest came from the material itself, not any applied ornament," says Crowley. Like Victorian-era mantels, these could be ordered from mail-order catalogs.

WHAT TO LOOK FOR

Among the most plentiful vintage wood mantels at salvage yards today are the mass-produced ones made after 1860. These were easier to remove than earlier hardwood pieces, which were often attached to wall paneling or even built-in seating. Expect to pay between \$250 and \$400 for a simple, painted pine farmhouse mantel, Victorian-era, Colonial Revival, and Arts and Crafts models with mirrored overmantels cost between \$700 and \$1,000, depending on condition, ornamentation, finish, and wood type.

In choosing a mantel, consider the age and style of your house. A mantel with squared-off corners, fluted pilasters, and dentil moldings under the shelf, for instance, would hark to 1940s Greek Revival. If you're not sure of your house's style, try to match details on interior moldings with those on a vintage mantel.

When scoring the salvage pile, bring a tape



Vintage mantels are typically 18" to 36" wide and 12" to 18" high.

measure and the dimensions of your existing fireplace opening. Most local fire codes require that combustible woodwork be installed no less

than 6 inches above and to the sides of the opening. And woodwork placed within 12 inches of the fireplace cannot project out more than 3/4 inch for each 1-inch increment from the opening. So it may be wiser to leave your search to larger mantels with slim profiles.

Of course, none of these safety issues matter if you don't use the mantel on a working fireplace. "A lot of people want those fireboards," says Andrew Berry, manager of The Iron Knot Back Doors Workshop in Washington, D.C. "All you do is mount the mantel on the wall and slide the lid into the opening." A twin entrance fits most mantel openings, usually about 40 inches wide. For a full or queen size bed, fill the opening with an upholstered cushion and position the bed to front of the mantel—when about 60 inches wide front side to side. For a creature (recline) the fireplace, Berry suggests putting a bedroll under the fireplace opening of a throne mantel, a cushion increasing the piece over a long rest. Even with out a fireplace, a vintage mantel adds depth and means as a plain wall, creating a welcome focal point, part of it has for centuries. ■

FOUL YOUR TAIL
Learn how to strip paint without a torch. Workshop, p. 30



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HOME TECH



Smart Gifts and Gadgets

>> A quartet of tech innovations to simplify your life

BY NICHOLE ROYMAN PHOTOGRAPH BY KEATE

SOME PEOPLE SAY A "SMART HOME" is one that will draw the shades at the sound of your rooster or light your garden path as you stroll along. But the truth is, great technology is the stuff that solves problems you already have, like keeping the floors clean, getting decent cell-phone reception inside the house, installing whole-house audio without tearing up walls, giving kids a safe and easy way to cook their own snacks. Here are a few innovative products we've found that will really make your home smarter place.

CELL PHONE THAT ACTS LIKE A HOME PHONE

RCA Call Dialing System, \$199, rca.com; Under Microsoft Cordless Phone System, \$199, microsoft.com. Cell phones don't always work inside the house, and it's especially easy to lose calls if you're talking while walking from room to room. All sorts of obstacles can block reception, from the building materials and decor inside your home to the landscaping around it. Rather than stand around

CONSIDER YOUR PHONE
With special dialing systems, you don't have to suffer weak signal—or dropped calls—when trying to talk on your cell phone at home. Some your cell phone is the cordless and use the built-in hand set instead. Press a button to toggle between inside and landlines.

PHOTO: JEFFREY M. HARRIS

"Best value in midsize family sedan."

—Detroit News

"The 2006 Hyundai Sonata fires a shot across the bow of Honda, Toyota and Nissan."

—Automotive News

"Bottom Line: With the 2006 Sonata, Hyundai convincingly beats the long-standing class winners in nearly every important category."

—Car and Driver



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PAPERWORK



BY KEITH PANDOLF
ILLUSTRATIONS BY ARTHUR GIRON

Q I need to shave a few dollars off my 2005 taxes. What home-related things can I do between now and December 31?

A BEFORE YOUR CAPACITY FOR ABSTRACT THOUGHT is compromised by too much holiday-related eating, and another year of "The Simpsons Christmas Special," here are a few last-minute actions you can take to lighten your tax burden.

Let's start with an easy one: Make your January mortgage payment before the end of the year. That will allow you to maximize the amount of your mortgage interest deduction for 2005. But don't get carried away, warns Tom Ochonicki, president of taxmatters with the New York-based American Institute of Certified Public Accountants. Making an early payment for January fits, but any more than that will raise red flags for the IRS.

Don't let other tax, tool, or other credits from your latest tax-consulting project go as an affordable housing nonprofit such as Habitat for Humanity. It's good for your heart and your wallet, since you can write off the fair market value of the donated materials.

If you're planning an adding machine, energy-efficient windows, or solar panels before the winter hold-off until next year, when you can take advantage of new tax credits. To qualify, you must buy these products between January 1, 2005, and December 31, 2007. Credits up to \$300 are available for purchases of energy-efficient materials, and credits of up to \$2,000 for new solar-powered water heaters.

Finally, 2005 is the last year you can deduct either state and local sales taxes or state and local income taxes. The IRS provides a formula, using your income level and the amount of deductions you claim, to determine how much sales tax you paid.

On top of that, you can also add deductions for the amount of sales tax on certain luxury goods, such as automobiles, boats, and even all-home-building materials. Thus, if you built a new house or addition in 2005, start adding up your receipts now. ■



For the Record

Keeping accurate records of your home improvement projects pays off if you plan to take advantage of certain tax deductions, as well as to secure future insurance. Here are some tips from Barry Ivers, president of the National Association of Professional Organizers. Stay organized, organized.

• **Keep notes by date.** Use a notebook, keep all documents related to last year's mortgage for business file, warranties for kitchen appliances, etc. Organize receipts from your architect, designer, or plumber in the relevant room file.

• **Keep a running tally of expenses** for each room on the outside of the file folder. That will help you track at a glance where your money is going.

• **Save samples of materials.** That way you'll be able to match down a perfect tile match if you drop a seat on the tile kitchen floor.

• **Take photographs or videos of each phase of the project.** Apart from providing a useful record of such things as electrical and plumbing work inside walls, you'll need them in the event of a dispute with the contractor over the quality of the work.

WHAT TO KEEP	WHY YOU NEED	HOW TO KEEP
Plans and blueprints	They identify electrical wiring you can't quickly pinpoint in future remodeling.	Protect by storing in fireproof box.
Insurance records	Insurance claims may have that proofed for adequate coverage.	Store in fireproof box.
Receipts and bills	Receipts for materials and labor are essential for tax purposes.	Store in fireproof box.
Photos and videos	They provide a visual record of the project.	Store in fireproof box.



Four With Features

[illegible]

Abstract

A continuous and rhythmic gasp-like pant suggests to you your subconscious is fully awakened. That does mean it tends to use what you've done, but you don't have to guess about the fit. After all, the theory suggests you're awake. Tell me a part of that. (1-800-770-9470) [gaspingsleep.com](http://www.gaspingsleep.com)

Before this spring bust, "Pomona Fest" failed, you had to go down into a hole to see a parade and you had to go down into a hole to see a parade and you had to go down into a hole to see a parade.

The speediest way to reduce the digital divide will be to use the satellite and cable lines that, through the public's share, we charge for. We have already done what we could in this regard, but

Can't-Miss Nail Drivers

To eliminate the chance of moving or slipping off the mark, these beds have a shallow shelf that allows you to rest the nail and rest on the work (looking the best) (links are informed via agreed the nailhead you can't miss. One thousand tag). You have to lift the top up to see how deep you've driven the nail. For nailheads to use the NailChow (near right, \$6, www.bey.com). For nails up to 4 in, use the self-centering nailset, \$5, www.bey.com.



DEPTH GUIDE: 1/4 inch recommended depth to red soil

WIRE GAUGE. No knots are used by the designer to match particular suitcases if you don't know the size of a market or area, use a bit slightly smaller than the need of the others in this case.

Product code: H040471

40	$\frac{1}{2}$
60	$\frac{1}{3}$
80	$\frac{1}{4}$
100	$\frac{1}{5}$
120	$\frac{1}{6}$

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James H. Hunter
Editor, Proceedings

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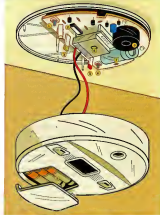
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HOW IT WORKS



- 1) TEST/RESET SWITCH
- 2) MICROPROCESSOR
- 3) LED OPERATOR LIGHT
- 4) LCD DISPLAY
- 5) LED BLUETOOTH
- 6) POWER LED, SWITCH
- 7) CARBON MONOXIDE SENSOR
- 8) HIGH-DECIBEL ALARM
- 9) BATTERY POWER SUPPLY

CO ALARM

WHAT IT IS An electronic device that alerts you when carbon monoxide exceeds safe levels.

WHY YOU NEED IT CO is colorless, odorless, invisible, and deadly. And it's not responsible for the human body to detect, monitor, or being alerted to.

HOW IT WORKS A sensor continually samples the air for CO molecules. A microprocessor collects the sensor's data, analyzes it, and sounds the alarm if CO concentrations become dangerous, at least 30 parts per million or ppm, over a 4-hour period.

WHERE TO INSTALL IT Install in the hallway, 5 feet off the floor and no more than 15-20 feet from bedrooms or rooms with boilers and furnaces.

DO IT YOURSELF In bedrooms or other areas with high humidity or within 5 feet of fuel-burning stoves and ovens.

WHAT IT COSTS \$20 to \$300, depending on features.

Breathe Easy

► Carbon monoxide alarms offer surefire protection from a silent killer

BY JOE HUNTER/ILLUSTRATION BY HARRY CAMPBELL

DISASTERS YOU KNOW BUT NOT TOLD YOU What you don't know—or, for that matter, see or smell or taste—can hurt you. In the case of carbon monoxide, it can kill you. The invisible, odorless gas, a by-product of all fuel-burning appliances, heating devices, and engines, is responsible each year for more than 280 deaths (and possibly thousands more unreported, accidental poisonings) in the U.S. alone. For only one class of houses have CO alarms, and only a handful of states require them. Why? One of the main reasons for CO poisonings, and you're among the unprotected, isn't the time to act.

To understand how these alarms work, it helps to first understand the way carbon monoxide affects the body. When inhaled, CO combines with hemoglobin, the oxygen-carrying component

0 Number of deaths from accidental carbon monoxide poisoning where a working alarm is in place.

in blood, to produce carboxyhemoglobin (COHb). Because COHb binds with oxygen so tightly—200 times stronger than regular hemoglobin—it slowly suffocates. Likewise, it's difficult for the body to expel CO, so even small doses can build to toxic levels. The brain doesn't recognize the danger because it regulates breathing rates based on carbon dioxide levels, not the body's need for oxygen. Poisoning occurs day or night, from headaches, fatigue, or nausea, but they never involve a clear warning from your body to seek away from a potentially deadly situation.

That's where CO alarms come in. By constantly measuring the air for the gas, which is almost always present in minute quantities, the detector calculates whether levels are high enough to pose a risk of CO buildup in the body. If so, the device triggers an alarm at 85 decibels or more, loud enough to get most anyone out of potential trouble. (Most deaths from CO poisoning occur while the person is sleeping.)

It's easy for an idiot to miss CO. The trick is to make one that reliably tracks the minute fluctuations in levels over time and sounds a warning only when the cardiovascular system's health risk. That requires a complex interaction between sensors and microcircuitry, which made such technology prohibitively expensive until 1993, when First Alert introduced the first battery-powered CO alarm for home use. Today, prices range from \$150 up to \$300, depending on the type of sensing technology and the sophistication of the features. There are basic battery-powered plug-in models, or fancier versions that talk, connect to a wireless network, or work in combination with a smoke alarm. But they all meet the same performance standard—UL 2034—set up and enforced by Underwriters Laboratories, so you're safeguarded no matter what kind you choose. Besides, installing one is no more difficult than mounting a smoke alarm. When are you wiring for?

The Truth About Test Kits

Flying on fears of malfunctioning CO alarms, some purveyors fill even apt modules with CO and sell them to homeowners for do-it-yourself testing. These kits certainly will cut off an alarm if the unit is functioning, but flooding a sensor with a dose every 15 minutes then what it's designed to sniff out won't verify if an alarm will sound at the lower levels that are just as hazardous.

What's more, the kits aren't even necessary: CO alarms have a test button that simulates a CO spike and exercises the circuit right down to the alarm. Besides, an alarm's primary is continually monitoring itself. If the sensor malfunctions or runs out, it should trigger a warning tone.



What to Look for

Keep these features in mind when shopping for a CO alarm.

Necessities

UL OR ETL LABEL Shows the device meets our best safety standards (UL 2034). Don't purchase any CO device that doesn't have either of these labels molded into it.

BATTERY BACKUP When the power cuts off—and the house loses heat, gas-powered generators and fireplaces are called into service—you need a CO alarm that's not dependent on a plug.

Niceties

LED DISPLAY Shows short-term peaks in CO levels—any rising above 30 ppm merits a warning tone before it reaches alarm-triggering concentrations. Units that display the highest level of CO alert you to a problem that needs fixing. If a poisoning has occurred, they help emergency personnel determine what type of treatment to administer.

VOICE WARNING Programmable announcements will sound CO/hazard alarm and tell you the location and type of danger the alarm is responding to.

WIRELESS NETWORKING Links alarms together without hard wiring so that when one alarm triggers, all alarms respond.

12-24

Number of hours it takes to flush low-level concentrations of CO from the blood; higher levels can take weeks.

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UPKEEP



Shock Value

» Installing a GFCI outlet is quick and inexpensive, and it could save your life.

BY HARRY SANTYERS
PHOTOGRAPHS BY BOB LUTHE



Installing a GFCI:

Step by Step

1 | **CUT THE POWER.** To edit any electrical work, first make certain the power is shut off at the breaker panel. Electrical contractor Peter Eng double-checks that the outlet is dead with a circuit tester, a device sold for about \$8 in home-improvement centers.

ELECTRICITY USUALLY reaches the ground through the safe confines of an appliance's wiring. But when it reaches the ground through some other medium—a person, for instance—the result is called a ground fault, and its consequences can be deadly.

Ground faults are a particular risk in wet areas, unless those circuits are protected by a ground-fault circuit interrupter, or a GFCI. A three-prong GFCI receptacle, with its little "test" and "reset" buttons, is to prevent a highly sensitive circuit breaker that can detect even a leak of just a fraction of an ampere from tripping—a ground fault—as might occur when you accidentally knock a hair dryer into the tub where your kids are bathing—and then instantly shut down the circuit before anyone gets hurt.

The National Electrical Code (NEC) now requires GFCI protection in kitchens, bathrooms, garages, and all spaces, unfinished basements, and all outdoor outlets. But if you have an older home without these receptacles, you can easily upgrade them yourself. It takes less than an hour and costs less than \$15 per GFCI. Turn the page for a look at how simple it is to install one.

What Size to Buy

GFCIs for home use come in two amperage ratings: 15 and 20. To determine what size you need, check at the main panel or fuse box for the appropriate ground-fault breaker or fuse for that circuit. The GFCI should match that rating. To be safe, also measure the gauge of the wiring—at the outlet, after you've shut down the power—using the markings on a wire stripper. A circuit with a 15-amp breaker or fuse is generally paired with 14-gauge wire; if the wire is thicker, however, consult with a 20-amp breaker or fuse must have 12-gauge wire. If wire size and breaker capacity don't match, have an electrician check out the entire circuit and install a breaker and/or rewireing of the correct capacity.



TIP

Exercise your GFCI sensitivity by plugging a light into the receptacle and pressing the test button. If everything is okay, the light will turn off and the reset button will pop out. If the light doesn't turn off, the light is still on. If they don't, you need a new GFCI.

Safety in Numbers

- 0.025 seconds** How long it takes a GFCI to shut down a circuit
- 3 seconds** How long it can take an overloaded breaker to shut down a circuit
- 0.2 seconds** How long it takes electricity to shut down an adult heart

(continued) Installing a GFCI

- 2) REMOVE THE OLD OUTLET.** Loosen and slide off the cover plate. Loosen the mounting screws that fasten the top and bottom of the outlet to the box, and gently extract the receptacle from the wall cavity. Loosen the screw terminals and detach the white neutral wire, the black hot wire, and the green or copper ground wire.
- 3) GROUND THE GFCI.** Using a pair of pliers, bend the end of the ground wire to create a hook. Wrap it clockwise with the head of the green screw terminal, then squeeze the hook closed with pliers. Tighten the terminal with a screwdriver.
- 4) INSTALL THE NEUTRAL AND HOT LINES.** On the left of the receptacle marked "line," attach the white neutral wire to the silver terminal marked "white." Repeat with the black wire attaching it to the brass terminal marked "line." On this Leaton GFCI, the opposite wire type is on the right side; read the instructions on the back of the receptacle, where a plate gives the copper and the screws are tightened. (This attach-and-twist method is much more secure than "backstabbing," in which the wire is held in place with spring-operated jaws.)
- 5) TEST THE DEVICE.** Check that all the terminals are tightly fastened, then back the wires into the box and install the mounting screws. Turn on the power at the breaker panel and use a circuit tester to see if the outlet is live. To make sure the interrupter is working properly, press the test button. The outlet should lose power until you press the reset button. When you're satisfied that everything works properly, reattach the faceplate.

For more information on home wiring, www.howtobuildit.com

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MATERIALS NEEDED TO COMPLETE THIS PROJECT

- STRAIT-LINE® X3 laser level (3M™ Command™ Adhesive Strips included)
- 10 shelf brackets with included hardware
- 5 finished shelves (approx. 12" x 48")
- Versus wall organizers
- Existing cabinetry or furniture

The X3 Laser Level is ideal for accurate, 2-wall leveling. It simplifies installation of

shelving and/or decorative objects that need to hang at the same height on adjacent walls.



FOLLOW THESE EASY STEPS:



1. PROJECT A LEVEL LINE ON 2 WALLS
 - Mark desired height at top of shelf bracket
 - Using a 3M™ Command™ Strip, adhere the X3 laser level to the wall and turn the power on
 - Use the bubble vial on top of the laser arm to level the laser line on the wall the tool is mounted to
 - Tilt the micro-adjust knob to place the laser line exactly where you want the shelf



2. INSTALL BRACKETS ON FIRST WALL
 - Use the laser line as a guide
 - Mount the first bracket to the wall 5" away from the corner
 - Mount the second bracket to the wall 42" away from the corner



3. INSTALL BRACKETS ON ADJACENT WALL
 - Use the laser line as a guide
 - Mount the first bracket to the wall 1" away from the corner (the additional 1" allows for the width of the other shelf)
 - Mount the second bracket to the wall 36" away from the corner



4. VERTICALLY ALIGN BRACKETS FOR 2ND TIER SHELVES
 - Remove X3 from the wall
 - Using a new 3M™ Command™ strip, mount the X3 underneath the first bracket (as shown) to project a laser line upward. Use the front bubble vial on the laser arm to make the vertical line level again.



5. TILT THE MICRO-ADJUST KNOB to align the laser line against the side of the bracket
 - Using the laser line as a guide, install bracket at desired height for 2nd row (on this example, we measured up 14")
 - Repeat Step 4 to determine location of each bracket in the 2nd row and 3rd row if applicable



6. ENSURE 2ND ROW OF BRACKETS IS LEVEL
 - Position laser along the top of the 2nd row of brackets to ensure that they are level
 - Repeat for 3rd row if applicable



7. INSTALL FINISHING TOUCHES
 - Use the X3 to align and install other organizational pieces or decorative accents

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HOMEOWNER'S
HANDBOOK
WEEKEND
PROJECT SERIES

Refacing Cabinets

by ALEXANDRA BARON, Project Editor, DYKOR, IN SMITH

THAT SWEET OLD WOMAN YOU HOUGHT YOUR latest find is truly wonderful—well, she is—especially the way she gave out homemade cookies to the neighborhood during the holidays. But we're sorry to tell you that the kitchen where she baked them—er, *ah*. We mean hideous, avocado green from the 1970s may be "in" again, but not like that. And those green-cabined, bad-matched, dark-horned cabinets with the best purling hinge put to rest, pronto.

We're not saying you need to get out and rebuild. Instead of spending, say, \$1,000 on a wall of new cabinets, over yourself some extra cash and reface the ones you have for less than \$1,000. It's amazing what a little veneer and a few new doors can do to brighten an aging space. Reface kits available through woodworking companies, and a few manufacturers even offer refaced stock veneer to make the task a lot simpler. You just have to be careful to measure twice and cut once, so a friend of ours likes to say, Work carefully, and still have hell. Sink brand-new when you're done.

Shaker cabinet doors in new maple, from Quality Doors, \$14 each. Maple shaker knobs, from The Home Depot, \$1.25.

COST
About \$50 to \$150 per door, cabinet, depending on material, size and finish.

TIME
Seven to 10 days per cabinet.

DIFFICULTY
Moderate. If you're a handy hand and a very sharp utility knife.

FOR COMPLETE INSTRUCTIONS, TURN THE PAGE AND SHIMMY

TOOLS
FOR THIS
PROJECT

HAMMER AND
NAILSET



SEASIDE PINE
AND
UTILITY KNIFE



SPYGLASS
AND
SHADE TANG



WOOD
BLOCK



DRILL
AND
DRIVER



HARTIGAN
1/2-INCH
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DRIVER



overview

REFACING CABINETS IS REALLY JUST a matter of switching out the doors after covering off the exposed parts of the frame with veneer that matches the new front. This technique works well with cabinets that have partial-overlay doors where the face frame is visible. But you can still reface cabinets with full-overlay doors, which have no face frame, and flush inset doors, in which the face frame sits in the panel on the doors. In both cases, you have to be careful to order doors that match the size of the doors you're replacing, rather than just measuring the cabinet openings and adding an inch to create an overlap.

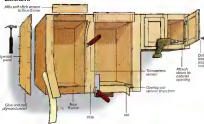
Self-stick veneer is easy to work with, since there's no contact cement to contend with. But its adhesive is still strong, making the work hard to remove and adjust once you've stuck it in place. So you have to be careful when measuring, cutting, and placing a strip on the cabinet face.

The hardest part of making a refacing job look real is trimming the veneer with utility knife or sand at set place. It helps to work slowly, to keep your hand behind against the cabinets to steady it, and to always use a sharp blade. Once you've finished the frame and installed the doors, it will be hard to tell that you haven't installed a whole new set of cabinets.

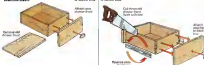


BUILD YOUR SKILL
Learn to attach veneer strips to your knobs and pulls and to trim the veneer.

CABINETS



DOORS



shopping list

1. **DOORS** Provide the matchsticks with dimensions to each size. Measure the cabinet openings. The width I like to include with the height called for is 1/2 inch, with a 1/4 inch overlap all around. (If you're using a door that's 1/2 inch wider than the opening, add 1/4 inch to the full width, which is 3/4 inch, to get the correct 1/2 inch. This will give you a 1/4 inch overlap on each side.)
2. **SELF-ADHESIVE VENEER** Also known as "contact" veneer. Comes in 2-foot by 8-foot rolls. Use roll widths about 10 inches.
3. **DOOR FRONTS** Measure edge to edge for the exact size of replacement.
4. **PLYWOOD PANELS** To cover the exposed parts of cabinets between edge to edge.
5. **HINGES** If cabinets are built to be hinged, so if you want to switch to recessed European hinges will require that doors be modified.
6. **KNOBS AND PULLS** If you want to change the look of the doors.
7. **TSP** (Trisodium phosphate), a cleaning degreaser for cleaning cabinets and preparing them to veneer.
8. **150-GRIT SANDPAPER** and **TACK GLUE**.
9. **CARPENTER'S GLUE** for attaching plywood panels.
10. **3/4\"**

11. **WOOD FILLER**

ILLUSTRATIONS BY
GRIGORYNEMIC

step by step

1

Glue plywood on exposed sides

Remove all of the cabinet doors. Clean the back and sides of the cabinets with TSP to remove grease (be sure to wear gloves). When dry, scuff all surfaces with 150-grit sandpaper. Wipe down with tack cloth.

Squeeze carpenter's glue onto the plywood panel.

Apply it to the exposed end of the cabinet back.

Secure the panel with 24 finish nails. Sink the heads with a nail set. Fill the holes with wood filler.

When working with painted door designs, consider using a door instead of plywood to finish the exposed work.

TIP

2

Cover the stiles

Measure all of the stiles (vertical frame members) and rails (horizontal members).

Using a straightedge and utility knife, cut the veneer into strips that are 1/2 inch wider and 2 inches longer than each stile and rail. Cut to the grain of the wood always face lengthwise.

Hold the first piece of veneer up to a stile and align it so that it overlaps at all edges. Push away a corner of the self-stick backing and press the veneer in place. Continue down the stile, peeling away the backing as you go.

Once the veneer is flattened, smooth out all bubbles with a wood block.

TIP

For a more finished look, cover the inner edges of the cabinet opening with strips of veneer before reving the face.

3

Trim the veneer

Veneer the stile on the other side and trim as above.

Use a utility knife to trim the excess veneer overhanging the cabinet opening. Run the knife along the outer edge of the frame as a guide.

Trim the top, bottom, and outer edges. When trimming at the joint between two cabinets, use a straightedge as a guide.

TIP

Change your knife blade often to keep your cuts clean.



4

4 Cover the rails

Apply the veneer to the rails of the cabinet so that it overlaps the stile on both sides.

To make a perfect joint between the rail and stile, line up a try square so that the blade runs along the inner edge of the face frame and the stock is against the bottom of the cabinet. Using a utility knife with the veneer as your guide, cut through both layers of veneer. LEFT

Peel away the excess piece of the rail veneer that you've just cut off. Now lift the edge of the rail veneer to expose the full piece of the stile underneath. Slide a razor under the edge of this piece to lift it off the face frame and remove it. ABOVE: Push the rail veneer back in place and smooth it down.

Finish all of the face frames in this manner.



5 Hang the doors

Screw the hinges to the door with a drill/driver.

Align the door in the cabinet opening and temporarily screw it to the frame. Close the door and adjust it until it is positioned correctly. Carefully open the door and tighten the screws.

If you're having a hard time getting the door to snap into the hole formed for them, gently tap the door into place with a wood block and a hammer or rubber mallet.

TIP



5



6

6 Attach knobs and pulls and finish the drawers

Use a drill/driver to make holes for knobs on the doors and pulls on the drawer fronts. LEFT: Screw the knobs and pulls in place.

See Illustration FAR LEFT for instruction on attaching new drawer fronts. If the drawer has a front at the end box, it need not; unscrew the old front and screw on the new one.

If the old front is attached to a 3-sided box, use a handplane to cut off the sides, top, and bottom of the front so that it is flush with the box. Then butt the drawer inboard and secure the new front to the backboard of the drawer (on the rail edges of the old front don't show). Screw from the inside of the drawer. Remove the drawer stile framework and reattach it facing the other way.

TIP When drilling knob- and pull holes, make a jig out of plywood (see Workshop page 303) to keep the hole placement consistent.

For more easy-to-follow instructions, visit www.woodbooks.com.

buying guide

The shape of door you choose—from the classic lines of the Shaker style to the dramatic swirls of raised panels—can transform the whole feel of a kitchen. Wood species and finish also cover the spectrum from cool and modern black or maple to warm and elegant cherry or mahogany. A less expensive option: Order doors unfinished or paint grade.

Here are a few styles to help you take your kitchen from kit to style.



(A)



(B)

FLAT PANEL

- (A) SOUTHWEST In oak. From Quikie Doors \$30 to \$100*
- (B) ROPE In cherry from Rustler. \$34 to \$134
- (C) 3-INCH BLADEBOARD In light maple. From Cabinet Door Shop. \$18 to \$33



(A)



(C)



(B)

GLASS

- (A) DOUBLE BEAD with lights in cherry. From Rustler. \$55 to \$145
- (B) 6-LITE In mahogany. From Cabinet Door Shop. \$30 to \$45



(A)



(B)

RAISED PANEL

- (A) OL MANCHESTER In cherry. From Quikie Doors. \$17 to \$113
- (B) PEAK (47) (H) (H) In mahogany with light oak/rail (RT) from Quikie Doors. \$52 to \$426
- (C) ARC In oak. From Rustler. Chair Dept. \$25 to \$113

* Prices include the edge from 15 to 25-inch to 26- to 45-inch-door sizes.

ITS
NAME
IS

MUD

...OR,
MORE
PRECISELY,

ADOBE

And remodeling with it can make a house look as good as it did when it was first built, 200 years ago



BY JAMES CLAVE
PHOTOGRAPHS BY
PETER WISLA

The Adobe Interiors
feature a variety of
styles, including
modern, traditional,
and contemporary.
In addition, every
interior is designed
to be functional,
and the living space
features a variety of
styles, including
modern, traditional,
and contemporary.



I

T WAS SPENDING. The snow had melted, the earth was still loose, and the acropas, or irrigator ditches, were running high. It was time to start building the new house.

Señor José's family helped him dig, go, go, as when he poured buckets of water down from the adobe ditches. He turned the earth back into the hole, added straw, and smoothed the resulting sides into rough wooden forms.

Hours later, he removed the forms and belatedly each fresh mud brick, or adobe, so red to flash drying in the shade. He then stacked them row with two feet thick, which he spliced with thick mud mortar (legit) to carry the load of the dirt roof. Finally, he sealed everything with ash, a mixture of wheat flour and diluted milk, and then polished the surface of the walls with rounded river rocks.

This house was built to last, and last it did—some 200 years. “He did a very good job,” says Bill Mincey, admiring the unknown man’s masonry work. “You have to do a good job for seven long to endure that long.” In 1999 and 2000, Mincey managed the team of builders, masons, and apprentices who worked to restore the house that was built in the early 17th century on what is now Canyon Boulevard Santa Fe, New Mexico. “We took it down to the structure,” says Mincey of his role as project supervisor. “It was a pretty well-preserved house.”

That was always the case. Though mud bricks are durable, if neglected they quickly fall prey to the elements. Otherwise a restoration crew will carefully probe an adobe wall and find that somewhere its boards wry it and then, over decades, finally washed the bricks away, leaving nothing but an outer shell of plaster holding up the structure.

Happily, the house on Canyon Road had escaped that fate. But its good “bones” weren’t the only reason Rosy Rowland and her husband, Mary, bought the property for a second home—the couple lives full time in Oakland, California—when they heard it was about to hit the market, in early 1999.

“It is about the most beautiful place you can imagine,” says Rosy. “When you go to the house, you enter a different world.”

She’s not kidding. The arroyo canal running through the garden—the acropas under (“mother ditch”)—dates to the city’s founding, in 1613, by Spanish colonists and was for centuries the lifeline of agricultural Santa Fe. Later, as the canal flowed in and out of the canyon on the path alongside the house, which the Spaniards dubbed El Camino del Cañon, and which was eventually renamed Canyon Road. By the mid-13th century, the neighborhood’s bones, chile, and cane fires had been replaced by the honest mud masonry of adobe—the foundations of the Spanish galleons and the routes that live the street today.

Canyon Road has changed, but the acropas still flow—it is on the property of the Historic Santa Fe Park and across—and neighbors

and residents still volunteer to clean it of weeds and debris each spring, as they have done for almost 400 years.

In keeping with its prime location, the property also offered views of “Santa Fe charm”—mud masonry roofs for the adobe, walls, slightly out of which traditional houses that contained top-ditch flow. The house contained four traditional curved and plastered lava fire places. Some fireplaces were just a hairline crack in the high, others several feet high. And the garden was a beautiful woodland of lilacs, flowering perennials, and fruit trees, including many large apple trees—out of which, held together with mud and plaster, were believed to be the city’s oldest.

The place had a good wife, and everyone felt it—from the flower trade to architect Sharon Woods, with whom they contracted to restore the house, to the man who directed the shovel and trowel. “It has a feeling about it,” says Mincey, who has worked on 40 to 50 such houses over his career, and calls the house his favorite. “You go in, and it’s like you’ve come home up on a big quilt.”

OF COURSE, that blanket was there before it was there a few places. Though the home’s mudstone kitchen, complete with heavy wood stove, was charming, the Rowlands ultimately concluded a had to go. The master bath, with its tiled-looking fiberglass shower, was above the rest-of-the-house. But both clients and architect agreed the basic outline of the house would remain intact.



CONCRETE window coverings made of soft cotton burlap, called window shutters, shield the study windows from the Santa Fe sun. ABOVE LEFT: When the adobe brick roof of compacted dirt was removed with shovels, the rigid Spanish pine logs that supported it remained standing but shaggy.

ABOVE RIGHT: Adobes—“mud adobe”—offer a glimpse of the walls’ adobe-kind construction. The lighting sconces inside (and out) are all new—built by New Mexico artist Christopher Thompson—sets the low-draw hardware. LEFT: A wooden cabinet in a niche between the kitchen and the study was built in 18th-century style. The drawers are all new to provide more storage space.

“There was no code back then. Door heights were based on the size of the person you were building the house for.”

—BILL MCEY, project supervisor



THE ART OF ADOBE RESTORATION

THANKS TO A COMBINATION OF CAREFUL WORKER AND LUCK, the adobe walls of the Canyon Road home in Santa Fe, New Mexico, were in remarkable shape when contractors exposed the windows, doors, and roof. But bad moisture found its way in—typically either via poor drainage at the footing, or a crack in the plastered roof parapets—some restoration would be in order.

Among perils, that means a call to Ed Grader. The historic preservation contractor is renowned throughout the Southwest for his work with historic structures, including so-called "true adobe" (that is, bricks made without rebar or additives) and mudplaster.

Grader and his crew first step off to adobe wall is relatively typical cement-based plaster to assess its condition. He lights a candle and uses a "bottle" (small sections of premade mudplaster) (see left) that are broken

with a hammer to the needed size. Using these tests to together without cracks, Grader then rebuilds the wall.

The real adobe comes out of plaster, and though most clients specify cement, Grader believes hard for earth. "We prefer mud plaster because it is repairable, allowing embankment to erode." The mix includes 20 percent clay and 80 percent aggregate, which changes from locale to locale, used on the way up.

At 10 to 15 inches thick, ordinary straw is also key ingredient. Grader chisel flat pieces up to 24 inches long. He adds it to the mix, then carefully trowels it into the wall with horizontal strokes to align the straw pieces horizontally on the surface. This stratification is key to forces rebar in to steel down the wall, rather than create elements, which eventually end into the plaster. "When the straw is parallel to the ground, water running down the wall splits and doesn't create a ratchet," he says. Finally, Grader and his team leave capillary tubes along the foot of the wall with a 12-inch-wide strip of polyethylene covered with filter fabric. Attached along the bottom of the wall just below grade, the material conducts water away from the footing through a drainage pipe.

In most cases, the amount of water materials do the job better than modern ones, Grader explains. In such plaster, he says, it's 10 years—better protection than what's given for most cement-based adobe finishes in Santa Fe.

"It was a matter of reintroducing the integrity of the structure and updating it," says Sherry Woods, who has contributed two well-regarded books on Santa Fe style.

Mossy's team replaced all the ancient plumbing lines, fixtures, and electrical wires, and installed a prefabricated drainage pipe along one side of the house—initially hidden from Canyon Road—to help send water away from the foundation. And while the crew needed to dig low most of the windows and doors, they preserved the varying roadway and door heights between rooms.

"There was no building code back then," says Mossy. "Door heights were based on the size of the person you were building the house for."

Woods and Betty Howland designed one version of the floor plan. Typical of original adobe homes, the place had no closets or hallways; Mossy's family grew and added total space was needed, extra rooms were simply stuck on the sides of the existing house, and a driveway punched through to connect them. In search of a space to tack a new powder room, the architect squared up a triangular-shaped room and designed the half bath to be a coat closet into the triangular space left over. Woods also enlarged two window openings at the back of the house—one at the kitchen, one in the extra bedroom—to accommodate French doors, but she didn't want with the house's exterior fireplace or any features visible from the street. Because the home is located in the heart of Santa Fe's historic district, any high beams, or even how many, would need the blessing of the city's Historic Design Review Board.

In the end, the board declared a sagging copper roof, made of leaded eapings, to be "historically inappropriate" (jokes intended), drive an unusually long canopy, as providing roof design that was dated for removal (the architect says it is plastic). Also, the homeowners agreed to attach a gazebo where the historic screen left the property, providing visitors easy access for its raised outlook.

Tweaking a Traditional Adobe

Like most original adobe, this one grew by adding on rooms as needed and has an overall hallway. The architect incorporated a new half bath by squaring up a triangular-shaped alcove, which was added to the fireplace space at the center of the house.



COURTESY OF ED GRADER, HISTORIC PRESERVATION CONTRACTOR



RENOVE: The kitchen's shelves still ring and reflect the home's history. Mossy's team replaced all the ancient plumbing lines, fixtures, and electrical wires, and installed a prefabricated drainage pipe along one side of the house—initially hidden from Canyon Road—to help send water away from the foundation. And while the crew needed to dig low most of the windows and doors, they preserved the varying roadway and door heights between rooms.



Mossy's crew set to work, stripping centuries of plaster from the adobe walls. The crew pried off an asphalt roof to reveal 22 inches of compacted dirt, which was removed the same way it went on—see above. With the roof of earth gone, roof Betty Howland, "the vapor rebounded almost a foot." Fortunately, all of the original potted logs—each was over the track of a pipe growing as the roof by larger de Cristo mansions—could be moved.

Where Woods had sprayed new concrete, rebar was shared channels but cable in the rock band mud bricks (the deep grooves were later plastered over). Plaster was applied flexible polyethylene supply piping in fixtures, and smoothed in new water pipes cut to the sewer under Canyon Road. The four fireplaces were restored and brought up to code.

The crew also took care to preserve the decade-old windows that draped across the front of the house. "We took that whole thing," Mossy recalls, wiring it hand in the delicately good stone, "and tied it on a lot of over 100 feet. Every day before we started work, we'd carefully pull it down and by it on the ground."

Woods and Betty Howland called for black slate coverings to the kitchen, plus cherry cabinetry and professional grade appliances. However, the area was not the house. New Mexico artist Christopher Thomas designed new doors and lighting throughout the house, complementing the polished steel and the diamond-cut stone plates covering the walls.

THOUGH WORK WAS FINISHED by the spring of 2000, it took a bathroom renovation in early 2001 to give the Canyon Road house its crowning touch. After over 100 years gracing the courtyard, the old set of the property's two granite pillars topped a windpipe, creating to each other a sense of the house that it had shared for decades.

"It just barely ticked the house," says Mossy, pointing out a fresh patch of masonry along the top of the roof parapet. "It just lay down right back on the patio. It couldn't have any roof down later."

Sitting atop the hill in the loss, the Howlands moved the fallen trunk over to Peter Grader, a local owner of traditional New Mexican cuisine, or even. It's a long, the area around with a lot of high sense of San Francisco, the city's prison state—and an area of good food local ingredients throughout the city. From his new perch on the courtyard, Francis now protects the house, those who live there the valley, and—for another 100 years, just as it is—those who will live there for generations to come. ■

Windows are getting bigger—and better, with improved materials and new technologies that'll keep you more comfortable indoors year-round. Here's how to sort through the bells and whistles to find the right ones for your home

BEHIND THE glass

By Mike Alexander

Photographs by Bruce E. Kays



FROM THE TSHY JOB SITE

In 1992 Modern style backlashed against the grimey cast-iron windows of George Healey's house all about the windows. Lots of windows. Healey saw all of them, to be exact, including a whole line of floor-to-ceiling picture windows looking over the leafy scene out back. "I basically bought the house for the huge backyard," George says of the sloping, one-third-acre lot. "I went to be able to see it from every room."

In this respect, George's home—this season's *The Old House* television project—is a typical Modern house. In the middle of the 20th century, Modern architects embraced new steel-frame building techniques, integrating walls from the burden of supporting the roof. This meant the walls could become curtains of glass, in effect dissolving the barrier between inside and out. The most famous example of this is Philip Johnson's 1946 Glass House, in New Canaan, Connecticut, in which all four exterior walls are made of windows.

Though large windows fell out of favor in the energy-conscious 1970s and '80s, today, look the glass and the frame building is as much more efficient. Despite rising fuel costs,

GLASS MATING
The back of Healey's house is a large picture window that is looking at the TSHY job site. The design team had designed the window to be made of glass, in effect dissolving the barrier between inside and out. The most famous example of this is Philip Johnson's 1946 Glass House, in New Canaan, Connecticut, in which all four exterior walls are made of windows.



A WALL OF WINDOWS
George Maher's kitchen and dining room LIT after three broad strokes of his fully belated. The burglar that had advanced here the property. Low-E coatings on the glass will cut down on the incoming heat in winter and to keep cool in summer. BUDER Tom sits in a window to make it look and punch as he and one of his crew install the strong floor glass and side glass.

homeowners are adding more glass to basins big and small, whether as part of a remodel, an addition, or all-new construction. "As the techology gets better, people are looking less gaily about going with bigger windows," says Will Kuhl, the architect for the Cambridge, Massachusetts, TV project. "They like having the house connected to the outside."

Unfortunately, most of the house's huge windows and sliding glass doors are the original, half-century-old, dirty single-pane units and have very little marketing value. They let too much heat blow out in the winter and rub in during the summer—the low efficiency is both a problem. Any replacement not only needs to provide better insulation, they also need to protect against the blinding effects of sunlight on wood floors, artwork, fabrics, and furniture through out the house. And they need to ensure privacy from the road in the lower jaw. "Design Consultants," page 32.

It's a lot to ask: modern views without bottomless energy bills, privacy without sunbathing delights, and warlike winter heating. But on-processor technology—combined with careful placement—is helping today's windows close to meeting those goals.



Deciphering the Sticker

Manufacturers typically submit their windows for tests that follow standards set by the Independent National Performance Rating Council (INRC). Their findings, reported on a sticker affixed to most manufacturers' new window labels, each represent as a number. The ratings below show what all the figures actually mean.



U-FACTOR measures how much heat escapes from a window through the window. The lower the number, usually between 0.25 and 1.00, the better the window's insulating ability in winter climates, look for 0.30 or lower. Winter climates can go as high as 0.75.

VISIBLE LIGHT TRANSMITTANCE (VT) measures how much light passes through the window. Anything higher than 0.40 is better. If you're in a sunny area, look for 0.50 or higher. If you're in a cloudy area, look for 0.30 or higher.

AVG. CONDENSATION RESISTANCE (optional) shows, through a number between 0.00 and 0.05, how well a window resists forming condensation on the inside during cold months in the winter during a mild summer. The higher the number the better the window but meeting minimums.

SH-GLASS HEAT GAIN COEFFICIENT (SHGC) indicates how much heat from the sun enters a window to come into a room, expressed as a number from 0.0 to 1.0. In warmer climates, look for an SHGC lower than 0.4, which means that less than 40 percent of the sun's heat enters a room.

AVG. LEAKAGE (optional) measures how much air leaks into a room through a window. Anything higher than 0.10 is better. If you're in a sunny area, look for 0.05 or higher. If you're in a cloudy area, look for 0.02 or higher.

AVG. CONDENSATION RESISTANCE (optional) shows, through a number between 0.00 and 0.05, how well a window resists forming condensation on the inside during cold months in the winter during a mild summer. The higher the number the better the window but meeting minimums.

GLASS Facts

The glass in a window is the first line of defense against uncomfortable extremes of hot and cold, as well as glare from the sun. "Comfort," where windows are concerned, is not a scientific measurement, but the National Fenestration Rating Council (NFRC)—a non-profit organization that rates the performance of windows, doors, and skylights—is working on ways to quantify it. "Comfort is the big issue now," says NFRC executive director Jim Beatty. "It's not only about efficiency anymore."

Window glass has come a long way in the past couple of decades. Very few windows today are made with single panes, which are rarely used for historical accuracy and need good access panels to work well. Most windows are double paned and sandwich an inert gas that doesn't conduct heat well, like argon or krypton, between the two panes of glass to create an insulating pad. Most expensive triple-pane windows up the efficiency while that type of glass in the sandwich—good for very cold climates or places where active is a factor.

There's more and window panes are only half the energy-saving answer. Most new window glass also has a low-E (for "low-emissivity") coating on one or both of the sheets of glass. Low-E coatings are factory-applied on the inside of the panes (not coated or incorporated into the glass itself) and cost of the panes (not coated or incorporated into the glass itself) and cost of the panes (not coated or incorporated into the glass itself) and cost of the panes (not coated or incorporated into the glass itself).

Originals developed to slow down the range of household heat during cold weather—increasing a window's insulating ability, or U-factor—today's coatings also can slow down the heat from the sun that enters the house, known as solar heat gain. (See "Deciphering the Sticker," left, for how those features are rated.) And today, the coatings also block most of the sun's ultraviolet rays, which can fade wood and fabrics.

Gold coatings, such as that at the TIGHT project house site, prevent a window from allowing too much heat gain in summer but still

BEAM FROM
FROM the
window's location
in place, the TV
project house
is ready for its
showing.

take advantage of it as means to offset heating bills. The short answer is, you can't have it both ways. But TQTV plumbing and heating expert Richard Trethewey says it's more important to control solar heat gain in summer. "It's not worth fighting for the extra heat in the winter, because it's two spacesuit-wild winters for the whole house," he says. "You'll save energy if you don't have to crank the air conditioning in the summer." While low-E coatings add 10 to 15 percent to the cost of windows, they reduce energy loss by 30 to 35 percent, which means, depending on the type of heating fuel being used, they could pay for themselves in 5 to 10 years. In fact, Michael Koenig, manager of the technical group at Andersen Corporation, often recommends a simple strategy: If you occasionally use air conditioning to heat the house where you live, keep windows with both a U-factor and a solar heat gain rating around 0.35.

That advice holds roughly in line with the U.S. Department of Energy and Environmental Protection Agency's guidelines for Energy Star-certified windows, generally a U of 30 or less. Energy Star windows generally get four or five star 10 percent of all windows, says Koenig, and double rated for the entire country will provide the best comfort in a wide range of weather conditions. The same choice for the Cambridge house—double-pane, argon-filled, and low-E—falls into this category.

The poorest performers of low-E is also where losses in energy range as "especially selective," meaning to keep out heat without cutting down on light—can come with early versions of low-E, which deflected the window glass. While windows aren't labeled as having a spectrally selective coating, it's safe to assume that any new window that doesn't have a visible tint and has good ratings on U-factor and solar heat gain coefficients likely has it.

For more on choosing windows, visit www.enr.com/hotbed.



Design Considerations



It might seem simple: bigger windows mean better views. In fact, properly placed windows can provide above-ground views (for the driveway or the street) without adding the glare that can come with their "fawing" (glaring). They can also create privacy screens for the house's very visible interior. By carefully mapping out window height, size, and placement, it's possible to play down about view and increase the better view—both built into the glass.

That's how a design consultant who is helping George Mahy with the window selection for his house, says he didn't start by choosing about how many windows to install. Then, mapping the entire site plan, he looked for windows that could be placed in a way that would be a good fit for the house's design. For example, from either side of a hallway, a window with a U-factor of 0.35 or less might be a good choice. But a window with a U-factor of 0.35 or less might be a good choice.

As the windowing building across the way (Building 10) typically sits at a 15-degree angle, the window that sits at a 15-degree angle of the floor could be a good choice. It's also a good choice for the window that sits at a 15-degree angle of the floor. The window that sits at a 15-degree angle of the floor could be a good choice. It's also a good choice for the window that sits at a 15-degree angle of the floor.

In other words, privacy is a good choice for the window that sits at a 15-degree angle of the floor. The window that sits at a 15-degree angle of the floor could be a good choice. It's also a good choice for the window that sits at a 15-degree angle of the floor.

Regarding the entry foyer for the eyes of visitors, light is a good choice for the window that sits at a 15-degree angle of the floor. The window that sits at a 15-degree angle of the floor could be a good choice. It's also a good choice for the window that sits at a 15-degree angle of the floor.

After the windowing building across the way (Building 10) typically sits at a 15-degree angle, the window that sits at a 15-degree angle of the floor could be a good choice. It's also a good choice for the window that sits at a 15-degree angle of the floor.

FRAME CHOICES

Because NFRC ratings also factor in the structural material around the glass, a window's frame is also important to its efficiency.

WOOD Traditional windows were framed entirely in wood, and solid wood windows are still sold today. Wood is a good insulator, but does require a lot of maintenance to keep up the paint or stain that seals out moisture and prevents rot.

ALUMINUM Windows framed with aluminum are very strong, but because metal conducts heat, they aren't good insulators. Manufacturers typically temper this drawback with plastic-strip insulation or by cladding a wood frame with aluminum on the outside.

VINYL Frames made of vinyl are the darling of the window market—relatively inexpensive, low maintenance, and good at insulating. They aren't as strong as a high-quality wood or aluminum frame, so better versions, like some of those used at the Cambridge house, combine vinyl with wood (the wood shows on the interior, the vinyl on the exterior).

One advantage to both aluminum and vinyl frames is the ability to have them painted or stained at the factory, saving the homeowner the time and trouble (and higher cost) of doing it after installation.

FIBERGLASS This relatively recent entry into the window frame market is a composite material that is very strong, an excellent insulator, and not prone to staining, warping, or shrinking. Like wood, it can also be molded into more profiles than vinyl to create interesting trim details like flanges that are more expensive than other options, and run at manufacturers' prices.

George Mahy opted for the ready-made for the project windows in his living room and kitchen: the frames are wood on the inside with fiberglass on the outside, and double-pane glass sandwiched in between. Perfect for holding up what appears to be a wall of glass—wide profile views of the backyard. ■



SOLID WOOD



ALUMINUM



VINYL-CLAD WOOD



FIBERGLASS and NFRC

Cast *from the* Past

Why nothing else looks like—and lasts like—real handmade plaster

BY THOMAS BAKER || PHOTOGRAPHS BY TOM BURAZIN

IN A SURPRISING PLACE:

woodstock on Chicago's industrial south side—a neighborhood dotted with gritty metal-sweeping plants and machine shops—a team of skilled artisans are engaged in an altogether more refined task: creating exquisitely detailed architectural ornaments in plaster. This corner of Old World craftsmanship is The Decorators Supply Corp., which has been making plaster ornaments the same way since 1853. From its working tables comes a remarkable array of objects, many hand-designed more than a century old: coffins, corbels, canopies, moldings, modillions, medallions, cherub heads, and elegant fluted pilasters, to name just a few.

Every bit of the work, from making the molds to mixing the plaster, is done entirely by hand in a process that has hardly changed since the days of the Pyramids. Mixing it requires a 6,000-hour apprenticeship—short 20 years as long as it takes to get a commercial plasterer's license.

Decorators Supply has managed to survive, and now thrive, despite a tremendous influence on interior design that has lasted nearly half a century. The market is once again eager for the traditional, eye-catching beauty of the past. But the resurgent demand for the look of handmade plaster has also spawned a rash of cheap, modern-day permission copies from lightweight polystyrene foam. At Decorators Supply, the plaster ornaments are made from heavy, durable plaster. But on their own, they can't match the hardness, the crisp detail, and the dimensional depth of the real thing. And in a world filled with the crisis, the plasticine, and the ephemeral, it's comforting to know that this kind of craftsman's artistry is still going on.



Crisp detail and texture are key to the handmade look of a real plaster ornament. The 18th-century cherub head is made from the same plaster as the one on the page.

Plaster Masters

The folks at *Decorative Supply* demonstrate the timeless technique for making a plaster knockup

- 1 It all starts in the vault, which safeguards 10,000 wooden carvings, including the company's line of plaster ornaments. Anonymous customers often take a look at these scroll and leaf designs out of which will come their century sign.
- 2 The carvings are used to create first impressions of the plaster, which then become the basis for the final plaster. The plaster is then carved out of which will come their century sign.
- 3 The original plaster is then carved out of which will come their century sign. The plaster is then carved out of which will come their century sign.
- 4 After the plaster is carved, it is then used to create the final plaster. The plaster is then carved out of which will come their century sign.
- 5 Carvings can be used on the wall to decorate walls and ceilings. But first it's applied to a paper "body" made in the company's mold shop. The result is a finished "master" ready for the next step in the process: making the plaster knockup.



- 6 The master is coated with a thick layer of liquid silicone, which softens very similar before it sets. The master is then placed in a mold and the plaster is applied to the mold. The plaster is then applied to the mold.
- 7 A plaster piece is then applied to the mold. The plaster is then applied to the mold.
- 8 The plaster is then applied to the mold. The plaster is then applied to the mold.
- 9 The plaster is then applied to the mold. The plaster is then applied to the mold.
- 10 The plaster is then applied to the mold. The plaster is then applied to the mold.



By a staff of plaster masters working in a studio
www.decorativesupply.com

FOR MORE INFORMATION, SEE DIRECTORY PAGE 14



We ranked our Roadshows to bring you a handpicked list of places where the in-the-know go for out-of-the-ordinary home products.

Every home pro keeps a little black book of favorite sources, a go-to list of people and places that offer just the right thing, whether it's the perfect punchy light fixture, a new kitchen glassware set or a table for woe on a deck that will instantly make the company of a cabal of friends feel special. Here at *The Old Heart* we have our own favorites, too. And we thought it was time we pulled the books. On the following pages you'll find 25 great sources for building products, lighting fixtures, plumbing supplies, decorative hardware, and a host of other home-related goods. More than a few of these should be entries in your own little black book. And if you might sources you're looking to share, log on to theoldheart.com and tell us about them. Because nobody should keep a good thing secret.

PHOTOGRAPH BY KEIRA GARDNER



Using 8 original, different new designs, wallpaper already popular across the Southeast, Bright 200,000 roll wallpaper line, 2008-09.



DOOR-KNOCKER PRICES AREN'T JUST BRICKS. THEY'RE ALL THE PRICES OF AN ANCIENT HISTORY.

brick

SALTED BRICK

1 **Gave Historical Bricks.** At the turn of the century, the streets of small towns in Ohio, Illinois, and Iowa weren't paved with gold. They were paved with brick. And not just any brick. These rugged pavements withstood years of wagon wheels and shoe leather—and still have plenty of strength left to hold up the SUV in your driveway. Brothers Miles and John Giesel have hauled back from old Midwestern roads, factories, and schoolhouses and ship them to homeowners all over the country for use in driveways, walkways, patios, and walls. These character-filled pavements will run you \$1 to \$2 each, but for pieces of history, you can't beat it. *Just City Stone, 319-615-3914, justcitystone.com*

decorative hardware

HARDWARE RENOVATION

2 **All Bar Wireworks Platters.** For you've finally found the perfect match for your English-style solid-brass door handle and back plate, but it's covered in 100 years of rust, dirt, and layers of old paint. What to do? Send it to the skilled workers at All Bar Wireworks. They'll sandblast the metal work away, clean it up, and then they'll hand-paint the metal work with a rich, dark patina. And once it's working like new, they'll make it look that way, too, with proprietary cleaning and polishing compounds applied with cotton, brass, and silk buffing wheels. *Wireworks, Elmer, 866-223-5954, allbarwireworks.com*

DOOR KNOCKERS

3 **Knock-knock Knockers!** If you're looking for something beyond the standard lion's-head door knocker to greet your visitors, you're bound to find it at this place, known for its extensive inventory of unique and hard-to-find items. There are nearly 100 door knockers for sale on its online store (and more in its Bucks County showroom), ranging from a cast-brass and copper-magnolia leaf for \$230 to a lacquered brass knocker for \$28. And, of course, most lion's heads that you'll find as a too. *Lafayette, Pennsylvania, 215-794-8845, knockknockers.com*

CUSTOM HARDWARE

4 **P.E. Gossin.** It's safe to say that New York has the most demanding designers and architects anywhere, and when they need something really original, they turn to P.E. Gossin. The company has been turning out hand-crafted door knobs, drawer pulls, lockers, brassware fittings, and other custom hardware products from its foundry in Greenwich Village for more than 100 years. Gossin's "antique hardware" carries a fine art price tag: door knobs from stock brass run (\$1,200 to \$2,500, depending on finish), in a custom-made elephant tusk for around \$12,500. *New York, New York, 212-343-5176, pegossin.com*

ALL BAR WIREWORKS HAS A STUNNING REPUTATION FOR RESTORING FINEST BRASS, IRON, AND CUPPER HARDWARE.



STILL-LIFE PHOTOGRAPH BY CLARA

5

E.R. Butler & Co. If Paul Revere were alive today and needed hardware for his home, he wouldn't bother making it himself. He'd just visit the Boston showroom of E.R. Butler & Co. Known for its dried-on renditions of early American styles, Butler specializes in decorative knobs, pulls, hinges, locks, and latches. Finishes are applied by master painters, who add hand-laid elegant standard metals like brass, bronze, nickel, iron, and steel. *Fitch, Massachusetts, 617-712-0238, erbutler.com*

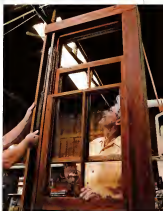
CABINET KNOBS AND PULLS

6 **Modern Inc.** Known as a go-to source for furniture and cabinet designers looking for innovative knobs and pulls, this California company offers sleek, simple, modern steel designs for the kitchen or bathroom. Some of Modern's creativity is fueled by its unusual design centers, which in turn help experts and artists to submit new ideas. *Modern Inc., 316-315-2496, moderninc.com*



FROM A BLACKBOARD IN BURLY VENEER TO FOUR PINK COCO COURTESY OF SHANE & KNOCKING (P.40)

MODERNITY GOES ALL THE WAY TO DENVER FOR BLENDING BRASS, IRON, AND PULLS (P.32-33)



LEEDS GLASS MAKES REPAIRING THE OLD-FASHIONED WAY WITH RIGHT-ON AND TENDERS TO HOLD THEM TOGETHER AND EASY WISDOM TO MAKE THEM MORE UP AND COOL.

—doors and windows

CUSTOM WINDOW

7 **Leeds Glass.** A few heavy-duty screens have only done so much damage to your Queen Anne's period steel window. What has happened down into the pins, where it was and broken, and it's time to do it. To replace it, you could go on and buy a generic one, but you'd be stuck with it, the way it was. Or you could turn to Tom Clark, who makes steel by hand, ending each window and screen pane, a perfect match. And it does. When installed, the window is a perfect match with the frame and look like they've been there for decades. Plus, strong enough wood like redwood, cypress, and adding zinc weatherstripping, means that they will be there for a few more. *Midland, Texas, 972-771-3441, leedsclark.com*

BARABE DOORS

8

Historic Doors Since ancient times these durable products, ranging from the most, a page to do whatever you can to improve on that first impression. One way is by upgrading your garage doors. Historic Doors specializes in hand-assembled frame-and-panel carriage doors of medium-stained woods like white oak, Spanish cedar, and mahogany, often topped with elaborate wrought-iron or forged-steel ornaments. As in some regions, Historic Doors also offers custom craftsmanship—so much so that when making a carriage or carriage door for a contemporary project, owner Steve Hirschfeld will sometimes use only the tools that were available back when the original was built. Kempton, Pennsylvania; 610-776-4187; historicdoors.com

—gates and railings

CART-IRON RAILINGS

9

Architectural Iron Company When it comes to decorative ironwork, not much compares with cast iron. Whether it's the graceful lines of an ornamental balcony or the heavy lifts of an Italianate covered porch, cast-iron railings define elements of much 19th-century architecture. Restoring and re-creating these period details is the specialty of Architectural Iron, which can handle jobs as big as restoring the cast-iron railings that guard New York's Grand Central Terminal and as small as reproducing an intricate balcony gate. The company has the original designs for cast-iron railing back more than 150 years (and can reproduce any of them), and sells more than 600 stock pieces, including ornate, spirals, brackets, and finials, on its website. Melford, Pennsylvania; 717-216-7722; architecturaliron.com

HAND-FOGED IRON GATES

10

Mohrweide Forge and Design What's the first thing you're supposed to see when you go to heaven? A gate, right? So why not be important, whether guarding the entrance to your suburban home or to the lives of others? What sets John Mohrweide's gates apart—most in mention his fire screens, tools, and other industrial metalwork—iron gates, other industrial style. A serious blacksmith and artist, Mohrweide brings the same driving, organic form to his gates as he does to his sculptures, which can be found in public parks and gardens throughout the country. Minneapolis, Illinois; 614-627-4364; mohrweideforge.com

—glass

BARBOLSON'S GLASS DOOR KINGS

11

Light Impressions Associates Whimsical people love "glass door knobs," they say, despite the inevitable, "plastic" glass style popular in the early decades of the 20th century. But after seeing Chris Barbolson's hand-blown door knobs, you'll never think of glass door knobs in quite the same way. Barbolson's version feature swirling, speckled, and multi-



BARBOLSON'S GLASS DOOR KINGS
ARTWORK: CHRIS BARBOLSON
DESIGNER: JEFFREY BARBOLSON

color patterns, in a single shape that recalls Victorian glassware knobs, but adds the flair of one of a kind glass paperweights. The knobs, which measure 1½ inches across, range in price from \$125 to \$225. Scarborough, Maine; 207-483-8164; lightimpressions.com

STAINED GLASS

12

Julian Studios In the mid-20th century, when stained glass was disappearing to the way of the handblown mosaic, the Julian studios continued making stained and leaded glass windows the way it had since 1877. Now, as the studios look into the future, leaded glass continues to lead. Julian Studios is leading the business into a new century. Julian Studios, which does both new and restoration work, often contemporary designs as well as those inspired by the Arts and Crafts movements of Southern California. Los Angeles, California; 310-447-8376; julianstudios.com

—hardware store

13

Seven Corners Hardware Even if you don't know a copper wire from a copper wire, you'll love Seven Corners Hardware. The independent-owned, 71-year-old store specializes in power tools of all makes and types, and recently launched an online empire stocked with more than 15,000 items. After years spent working with building pros, the floor managers claim that their tool know-how could come in handy for any business employee in the southeast. But Seven Corners is

GRAB LIFE BY THE HORNS



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not just for wood prices. Its 14,800 square feet of floor space is heated, goes to 16-foot ceiling, with basement rooms, and only hundreds of different kinds of lumber, glass, and hardware. St. Paul, Minnesota, 612-234-6117, stump.com

—lighting

INTERIOR LIGHT FIXTURES

14

Stable Steel These handcrafted chandeliers, scones, and lanterns are inspired by those found in old Swedish palaces, historic Federal-style homes, even from works of architecture such as *Wassenaar Abbey*. The simple lines, attention to detail, and range of hand-painted finishes make Stable Steel a favorite of designers, who choose its fixtures for contemporary as well as traditional settings.

New Britain, Connecticut, 860-862-7333, stablesteel.com

EXTERIOR LIGHT FIXTURES

Thomas Lighting From its base in Kentucky, Thomas's three-person design team scans the world—Spain, Italy, China, Mexico, you name it—to discover the latest trends in outdoor lighting, but its architects, lantern designers, and interior designers. Then they come back and incorporate those global trends into more than 60 different lighting collections.



SHOWER-COVER THOMAS'S EAST AFRICAN LANTERN BURNING \$ UNFINISHED

The result is a mingling of styles, colors, and finishes in exterior and interior lighting fixtures. You can always find something to suit your taste and budget, whether it's a bronze-finished bathroom sconce for \$130 or a polished brass chandelier for \$1,000. Louisville, Kentucky, 502-363-4443, thomaslighting.com

—lumber and millwork

16

Stark Millwork Savvy homeowners and contractors look around the country call on Stark for just about any millworking need, including reproducing molding, doors, and windows for five-foot-tall Lloyd Wright homes. Getting the molding you want is as easy as sketching on paper or a piece of paper and dropping it in the mail. If Stark doesn't have it, a millworker will make custom corners and ship your hardwoods, composites, door casings, or crown molding in a couple of weeks.

Nauvoo, Pennsylvania, 610-737-1733, starkmillwork.com

17

Custom Hand Hewing If you want the lumber skills of an early colonial-era farmhouse to look as if it's been there as long as the rest of the place, you can't use wood that was milled recently. Recreating the right textures, slices from a timber salvager, isn't always easy. That's why we were glad to discover Dan Dutton, who gives new timbers that unique look by hand-hewing them. This year, Dutton, who has been swinging his broadaxe and axe for almost three decades, will have about 75 beams, moldings, and door and window frames for customers from Maine to New Jersey. He charges between \$12 and \$12 a running foot, depending on the size and type of wood. Cantonment, New Hampshire, 603-746-5122, handhewing.bizland.com



A FINISH DIRECT TOPS A LEADED GLASS WINDOW TAPING SHAPE AT BURGONSTUNGE

HOLIDAY GIFT HINT KIT

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Dear Santa,

This year I have been slightly better so I really really hope for a Craftsman® Tool Storage Chest.

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Santa

Santa's workshop

The North Pole



THIS HOLIDAY GET WHAT YOU WISH FOR.

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—*paint*

INTERIOR PAINTS

18

Green Power How many times have you picked what you thought would be a great color from a paint shop, only to discover when you were in your living room wall? When it happened to C.J. Villa, who couldn't find the perfect shade of turquoise, she decided to make her own. Green Power coats up to 15 colors, is opposed to the standard two we're used to mix most commercial paints, and contains no black or gray pigments, which absorb too much light. The results—such as names like Honey Dipping, West Shaker, and On Fire—are so deep and lasting that a room covered in them could make even the Land of Oz look as dull as a blonde woman. The paint goes around \$10 per gallon, but they're quickly winning over interior designers and anyone frustrated with the overwhelming quest to find the perfect shade of, well, whatever.

Tucson, Arizona; 520-564-1300; greenpower.com

—*plumbing fixtures*

CLAW-FOOT TUBS

19

The Bath Works The American old-fashioned company, The Bath Works is still tubs that are finer than king. Literally. Most of the porcelain, iron, copper, and brass tubs—which include claw foot, slipper, and double-ended styles—were designed in English manors and French châteaux and then delivered to a Chicago unlikely location:



SAVING ELEMENTS PROJECT
This vintage-style
bowl is made of iron and
copper. (L&L)

a shop in small-town Tennessee. But if the prices feel like you're paying a king's ransom (\$15,000 for a top-of-the-line oversized copper bathtub), the company also makes reproductions in steel (\$2,000) and cast iron (\$3,000).

Franklin, Tennessee; 615-591-7030; lshathworks.com

—*verre*

VERRE ELEGANCE

20

Loving Elements The "green" trend has spawned plenty of companies making eco-friendly household products, but few have done it with as much style as Loving Elements. The 3-year-old Texas company is committed to using materials that are either recycled, like the copper, bronze, and nickel used in its barware, vases, and mirrors, or renewable, like the teak wood used for its countertops, furniture, and flooring.

Burnet, Texas; 512-424-7975; lovingelements.com

—*staircases*

CUSTOM STAIR SERIES AND COMPONENTS

21

Adams Stair Works What are this craftsman's truest other reason for replacing stair parts is that the company does all work on-site in its custom woodworking shop. That means Adams can turn around your project more efficiently, make changes faster, and do complicated custom designs like rope railings and more intricate staircases. Adams offers a full range of services, from the design and installation of a grand curved staircase to the replacement of a single of broken spindles for a Victorian-era house in South Carolina. Whether with architecture and design experience can talk homeowners through detailed shop drawings and via e-mail. The Adams website offers hundreds of stair components, including railings, spindles, and balusters available in 15 species of wood, stainless steel, even glass.

Greenville, Illinois; 617-523-1177; adamsstair.com

—*walls and floors*

VINTAGE WALLPAPER

22

Secondhand Rose When it comes to wallpaper, there's plenty out there that looks like it but not much that's truly unique. Which is why, when they want something really different, homeowners, designers, even movie-set decorators go prodding the shelves at Secondhand Rose. Its

1. Most walls inside homes are made of paper-faced drywall.

2. Mold eats paper.



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WORKERS AT A BROOKLYN FACTORY TURN RECYCLED GLASS AND CONCRETE INTO COLORFUL SLABS OF GASTRONOMY.



100,000-roll collection (most 150-in. beams or in rolls) spans more than a century, from the 1860s through the 1990s. "And they're all new," says manager Martin Demerzio—which means there's no chance you'll see the same wallpaper at your neighbor's house. That exclusivity comes at a price: Decal's rolls (40 to 70 square feet) start at about \$130, comparable to most of today's vinyls and papers, but if you want a design by Frank Lloyd Wright, it'll cost you \$1,200 for a 50-square-foot roll.

New York, New York, 212-353-4000; www.wallpaper.com

WALKING ON IT

23 **Balcone Specialty Building Products** Woods like oak, cherry, holly, alder, and red hick are sought after by those who want a rugged, rustic look for floors and walls. Problem is, those trees grow in small patches across the Pacific Northwest and are rarely available in any volume at lumber yards. Balcone takes out those understated species and recycles them for the way you project. Clients can call or e-mail orders ranging from a single board to a truckload, out to order, already finished or sanded, stained, graded, flooring, walling, or even made for framing. Spokane, Washington, 509-497-4000; www.balcone.com

RECYCLED TERRAZZO

24 **Jerfume** If you love the look of a classic terrazzo floor, you have to be prepared to have a cure stamping through your house for at least four days while they prep and pour the stone-embedded cement mix, wait for it to cure, grind it, and polish the finished surface. Or you can consider Surface Decal's Surface, a new, high-tech terrazzo made of recycled glass and concrete. Available in 4-by-4-foot tiles (\$90 to \$145 per square foot, installed) or two-color rolls. Jerfume is fabricated and installed like natural stone and can be used on floors, walls, countertops, and shower surrounds. No wiring necessary.

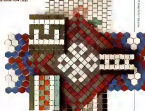
Brooklyn, New York, 731-624-4000; www.surfacedec.com

REPRODUCTION TILE

25 **American Restoration Tile** Whether you need to replace or match a missing tile, or simply create a classic mosaic pattern on the floor or wall, there's no better source than this. Owner Bryan Byrd manufactures an encyclopedic array of traditional mosaic designs and will custom-make tiles in the shape, pattern, and color of your choosing, from simple subway tiles to elaborate buskware borders. Then he'll ship them to you in shams, perfect for DIYers. "We number each sheet and have a list of the games we cut out of it," Byrd says. "I encourage homeowners to do their own thing."

Madisonville, Arkansas, 501-452-0000; www.americanrestorationtile.com

BARBERING WALLS AND FLOORING WITH NEW DESIGNS FROM AMERICAN RESTORATION TILE.



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throughout the staining process, without having to constantly rub your stain to maintain your desired color. And Varathane's premium pigments will never fade, so you can count on consistent color color from one use to the next. Fewer coats and faster dry times means less time staining and more time to admire the beauty of your craftsmanship.



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handrails

Massachusetts homeowner Everett Flint needed handrails in his stairways but was puzzled by how to put them in. He emailed Ask This Old House, and Tom Silva showed up to lend an expert hand.



irrigigation

Outside of Los Angeles, Roger Cook and specialist Bob Gilbreath help homeowner Sherry Steele restore water to her slice of the High Desert.

sinks

Minnesota homeowner Anne McCandless tried to fix her rusty bathroom sink stopper with a poppin' stick. Richard Tuckewsky provided a more professional solution.



closets

California couple Gordon and Harlene Gauthier's sliding closet doors were stuck. They emailed Ask This Old House, and before long Tom Silva put them back on track.



what's your problem?

Tune in this fall and watch *The This Old House Hour* on PBS to see if we have the answer you're looking for.

Ask This Old House

Visit www.thisoldhouse.com/tv/schedule to find out when shows are on in your area.

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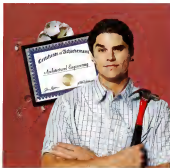
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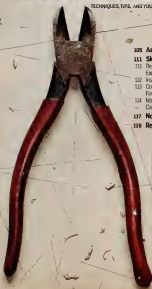
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WORKSHOP

TECHNIQUES, TIPS, AND YOUR QUESTIONS ANSWERED



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Over the years, our current readers have seen the diagonal cutters specialized pliers for slicing through wire and sheet. The new angled cutting pliers, on the other hand, are angled about 15 degrees from the plane of the handles, allowing South with without scraped knuckles. Ideal for helping you work in tight spaces.

PHOTOGRAPH BY DAN WINTERS

MODERN IS THE NEW OLD



ARCHITECTURAL RENDERING OF THE CAMBRIDGE PROJECT COMPLETION, DECEMBER 2008

TUNE IN THIS FALL AS THE THIS OLD HOUSE CREW RESURRECTS

A TIRED 1950 CONTEMPORARY IN CAMBRIDGE, MASSACHUSETTS,

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**Storm Door Ice Buildup**

I replaced a entryway storm door that had rotted because ice formed frequently on the inside of the glass panel. The following winter, ice formed on the inside of the new door in fact, the ice builds up to about 1/2 inch thick. What can I do to stop this from happening?

Kilbuckville, New N.J.

Ten-tilt reply: You need two things to make ice cold temperatures and a source of moisture. Moisture vapor leaking into the space between the door and the storm door might cause some snow, so make sure that the main door is weatherstripped around its entire perimeter. If the weatherstripping is in good shape, it might be that the storm door is actually too tight and not allowing trapped moisture a way to get out. The solution is then easy: it to drill four 1/2-inch-diameter holes, two about 1 inch from the top of the door and two about 1 1/2 inch from the bottom. This will allow ice to melt without reducing the effectiveness of the storm door.

But a coating of ice as thick as what you describe makes me think that water is somehow leaking in from above and freezing on the glass. To stop such a leak, first check the door for missing weatherstripping, particularly at the top. Also, see if there's a small dribbling on top of the door casing, and caulk the joint between the side casing and the siding. Speaking of caulk, there should be some sealant under



TOD's general contractor Tim Stone says that adding weatherstripping is always better to ensure you prevent condensation from entering inside a doorhouse to winter.

between the storm door frame and the door casing. It's mounted so. If there isn't any, remove the frame and run a line of heavy caulk behind it before putting the door back. I prefer heavy caulk in this instance because it stays soft and pliable against metal.

Finally, check the siding and windows above the door to make sure they're weathering too. If water is getting in through an open joint around a window or at a crack in the siding, it's likely enough to work down to the door and freeze just where you wouldn't expect it.

Dangerous Dust

I installed a dust collector with 4-inch-diameter plastic duct to keep my basement woodshop clean. But I've heard that dust collectors power up static electricity that can catch fire. Could you explain the danger and tell me how to avoid it?

Mark Pomeroy, Glenview, Ill.

NewsAnswering: What you've heard is correct: Static electricity certainly can build up in a collection system made with plastic duct, and that static charge can easily ignite the dust and debris working inside the collector bag. Sealing ducts particularly des-

{ Q: WHAT IS IT }



- A Military-spec dustboots
- B Alligator clamp
- C No handle piece
- D Or...

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DREMEL

Ask This Old House

gorous because it's so flat. You can buy a grounding kit to blind off the noise, but Gene Goumen, who works for the company that installed the dust collection system at the New Yorker Workshop, where I often build furniture, recommends that you switch to pneumatic sand discs. These 26- or 24-gauge sand discs don't build up a static charge or clog up with debris, and they're cheap and easy to swap.

That said, you are doing the right thing by exposing workers. Not only is it a danger to lungs and nasal passages, it doesn't smell all that great, either. It can be gained by an electric spark, the pilot light on a gas water heater, or the burner on a boiler or furnace.

Fixing a Cracked Rafter Tail

The eaves of my house are sagging in one spot where a rafter for rafters right above the porch where it ends up the wall. Cannot be fixed?

Mike Houlihan writes

Tim-John replies: I think so, with the help of some polyurethane glue. Run the crack open a bit, dampen it with water—polyurethane cures faster on wet wood—then use a nail brace to force the glue into the crack. Now brace the rafter tail in its original position until the glue cures. One way to do this is by temporarily attaching a board across the underside of the rafters on both sides of the cracked one. This will “bracket” the strength



Q: WHAT IS IT?

D: Rafter clip
Securely anchors the edges of a rafter where there are no grommets. A crossbar pushes the joint together and is held in place by a notched nail. Pushing down the bar on the long releases the bar and opens the clip.

of the good rafters to support the damaged one.

If you want to strengthen the rafter even more, take a 1x6 brace board that's as wide or so wider than the rafter ends and fasten a permanently secure all of the rafter ends. For this fix to work, however, the roof sheathing has to extend past the rafter tails by at least six inches so you can tack the brace up underneath it.

Iron Pipe Repair

I have a 60-year-old cast-iron downspout that leaks slightly apparently from a fine crack in its underside. Is there any way to patch this pipe and avoid the expense of replacing it?

Shelley, New York writes

Richard Trethewey replies: You can get a repair sleeve for cast-iron pipe at home centers and plumbing supplies. It's a one-piece lead, stainless steel jacket that tightens around a damaged pipe to completely seal minor leaks.

But even with the sleeve in place, a fine crack like this can easily spread along the entire length of the pipe, especially if it's near the end of its life. So I recommend that you open your wallet and replace it now. It may seem expensive, but it will be a bargain compared with the mess you'll have after the old pipe gives way completely. Based on my experience, I predict this will probably happen at about 11 P.M. in the middle of a snowstorm when you have a house full of guests.

For times when there is little room to work and even less room for mistakes.

The bathroom can be a tough place to work. Dirty, cramped, and crowded. Which is no excuse for poor results. Enter the Dremel 400 Series XPR. It helps you work confidently next to the toilet, sink, or shower or under the vanity. And the XPR stainless steel chisel provides complete control when routing through intricate areas like creating counter-top to copper pipe. So when you're finished you can be proud to tell the work your own. If you have any questions along the way, please call a 1-800-466-1234 or visit dremel.com.

DREMEL 400 XPR



Where some clips, a rafter tail may be at fault.

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Drilling Jig for Cabinet Doors

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How to make sure your cabinet knobs are drilled the best.



New doors for cabinet-refining projects generally don't come with holes for mounting the knobs. That's your job as the installer. There's a good way to go about it—carefully measuring

and marking each door—in close and highly accurate. You'll also get a light secured a drilling jig.

Just plan a 1/2-inch deep slot in the top edge of a red-wood piece of 1/2" or 1/4" thick plywood big enough to cover the top of the door when it's closed.

1. Determine the knob height. Using double-sided tape, stick the knob to the door edge at various heights. When you find the right hole, mark it with a pencil. Then make a horizontal mark at the center of the knob's base (use a combination square to extend that mark to about the center of the slot).

2. Find the center of the slot. Take a combination square and rest the outer side of its handle on the bottom edge of the door. Line up the blade with the lower corner of the slot and lightly draw a line along the rule from the corner of the slot up to the center of the slot. The square now and the rule are shown in the illustration. The center of the X marks the center of the slot.

3. Mark the knob hole location. Place the right-angle side of the square's handle against the bottom edge of the door and line up the edge of the rule with the center of the X. Make a vertical mark across the handle, but leave the handle in place.

4. Drill into the door. Clamp a scrap of wood behind the door to prevent chipping. Drill a small hole through the slot where the horizontal and vertical lines meet.

5. Drill into the jig. Place the jig's plywood top against the edge of the door with the face of the jig against the outside face of the door. Line up the jig's left-hand edge with the bottom edge of the door. Clamp the jig in place. Then insert the bit through the hole made in Step 4 and drill slowly through the jig. Label the hole so you'll know whether it's for a left-hand door (with hinges on the left side) or a right-hand door (hinges on the right).

The same jig can be used to drill the holes on both left-hand and right-hand doors. Just repeat the steps above to center the hole in the slot, then drill through the jig. Label that hole as well. To see the full instructions in "Building Cabinets," page 105. —TIMOTHY GARDNER



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What's on TV Now

Don't miss these vintage projects on HGTV, DIY Network, and local broadcast stations. Go to [www.ThisOldHouse.com](http://ThisOldHouse.com) for local stations and times and for additional information about the projects featured here.

HGTV

WATERLOO

The show kicked off its 20th anniversary with the renovation of a sprawling 1500-Queen Anne style Victorian in Waterville, Massachusetts.

CHARLESTOWN

This Old House worked on the expansion and renovation of an 1800 Second Empire townhouse on Parker HS Street in the Back Bay neighborhood of Charlestown.

WEST PALM BEACH

This Old House turns heads in sunny Florida where they transform a Mediterranean Revival style bungalow into a delightful tropical compound.

DIY NETWORK

BELMONT

The restoration of a 1907 single-style Victorian is featured in this project. It also includes the removal of asbestos siding and the overhaul of the kitchen.

RAVENSAN BUNGALOW

The expansion and expansion of a 1930's terrace-damaged, Queen Anne bungalow is the featured project.

LOCAL BROADCAST STATIONS

LEXINGTON

Noted architect Graham Gund designed a second floor addition and a guest room for this modest transformation of a typical 1950s home, instead of reinforcing the past. Gund invented the present, and the result was a house designed with modernism.

This Old House CLASSICS

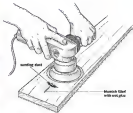


Norm's Notebook



"For me, getting accurate cuts with a jigsaw is mostly a matter of positioning. I put myself directly above the saw blade, not off to one side, so I can see the teeth cutting along the line."

—NORM NIEMI, THIS OLD HOUSE MASTER CARPENTER



Making Invisible Wood Repairs

If you're installing unstained wood trim that will be getting a clear finish, here's an easy way to fill nail holes and narrow joint gaps while perfectly matching the color of the wood. Just mix wood glue with fine sanding dust from the wood itself. Brown wood-working glue works best on dark woods like cherry and mahogany; yellow carpenter's glue works best for lighter-colored woods like pine and Douglas fir.

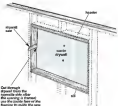
On vertical surfaces, I blend the sand-dust mixture into the glue before applying it. On horizontal surfaces, I'll often do some undisturbed glue into the joint or gap. Then sand around it to create some dust that I can mix into the wet glue. In each case, it's important to sand the filler immediately so that the glue doesn't soak into surrounding wood. You may clog up the sandpaper somewhat with wet glue, but I think it's well worth taking a piece of sandpaper to get an invisible repair.

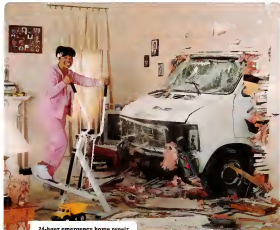
Cutting a Pass-Through

A pass-through opening between a kitchen and a dining area normally help make a small kitchen feel less cramped. And it can be done without having to install drywall or repair—or replace—the walls afterwards. Just make sure you're cutting into a part that will be covered in a last-bearing wall needs temporary supports and additional framing.

First, cut the opening into the drywall on one side only. Follow the inside edges of the studs. Then cut into the exposed middle stud or subframing a circular saw or reciprocating saw and complete the cut with a hand saw. Leave the drywall on the other other side intact. It will help hold the stud steady as you cut. Next, glue and screw in place your new pieces of framing: the header and stud.

Now that the rough opening is framed, go around to the other side and screw the top and bottom edges of the drywall to them. Stop until seal and cut out the remaining piece of drywall with a drywall saw. Use the framing to guide the blade. If you work carefully you'll only need to attach drywall patches to the exposed edges of the new framing. The patches don't need to be perfect; they will be covered by trim, so all the pieces and the rest of the wall will remain unaltered.





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FRONT COVER

Architect: Wallace Pederson AIA, Austin
Pederson Custom, Southport, CT
203-255-4021, apederson@aol.com
Light Fixtures: M-5298-40 Taylor Pew Themes
Lighting, Louisville, KY 800-826-5044
taylorlighting.com

BATH DESIGN

It's a Retreat
pg. 37-38



Architect: Erica Groberg, Erica Groberg
Architect, East Hampton, NY 631-329-9828
www.ericagrobergarchitect.com
Contractor: Nicholas Alenabaru
Southampton Building Corp., Southampton,
NY 833-283-0403

Cabinetry design: Smith River Kitchens
East Hampton, NY 631-809-7122
smithriverkitchens.com
Title: Alan Court &
Associates, East Hampton, NY 631-324-7490
Plumbing and lighting: Available through
Cape Design Center, 800-553-2299, capedesign.com

BACKPAGE

Curved for the Month
pg. 41-42



Material dealer: The Brass Knob Back Doors
Newhouse, Washington, DC 202-288-0547
thebrassknob.com

Painted via lighting and finish carpentry: The
Shagging Workshop, Washington, DC
202-544-1470

For further reading: The Elements of Style
Revised Edition, A Practical Encyclopedia of
Interior Architectural Details from 1475 to the
Present, by Stephen Carlaway and Elizabeth
Carlaway, Simon & Schuster (1997)

BACKPAGE

Box Office and Records Management
p. 49



Special thanks to—The American Institute of
Certified Public Accountants, New York, NY
212-595-6200, aicpa.org; The National
Association of Professional Organizers
Glenview, IL 847-375-4746, naipo.net

TOOLBOX

Shank Value
pg. 50-52



Materials: Stanley 58, 300-58 C11, Stanley
Works New Britain, CT 800-252-2765;
Stanleytools.com; General Tools 770-332-
3940; D1 New York, NY 800-393-3567;
go to the end of the line 32942-1 Spoutline
PA 800-356-6046; modernize.com; Lee
Valley Tools 440-330-0200;
Optimyst, NY 800-871-6258;
Jensley Corp., Jacar Woodworker 5732
Rapid-fire, Alameda, CA 510-521-1033

Directory



Special thanks to—Shank Corp., Wilmington, NC,
800-587-7535; shankcorp.com
Special thanks to—Chris Woolly at Stanley
Tools, Price Parts at Garrett Wade, and
Andrew Scorse at Lee Valley Tools

HOW IT WORKS

Evolutionary
pg. 53-55



Carbon monoxide alarm: Kidde Safety
Instruments, NC 800-363-5811; kiddesafety.com
First Alert: B&B Brands Inc., Aurora, Illinois
630-831-7330; firstalert.com
Carbon monoxide alarm test kit: National
Safety Products Inc., Finksburg, MD
877-462-3608; testproducts.com

UPKEEP

Shank Value
pg. 50-52



Electrical: Prime Electrical Enterprises
Inc., New Milford, CT 860-350-1364
EPIC remodeling: London, NY 607-433-
1433; ny-800-836-3065
Roofline: Butler Gardner Bender Milwaukee,
WI 800-555-4211; gbrbinc.com
Linens: Jiffy-It's-a-Tools Inc., Chicago, IL
800-553-4275; jiffytools.com
Wireless: Motorola Inc., Sparks, MD
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PHIL WHITE ALWAYS FIGURED the old house on the hill was in trouble. For years he drove by the abandoned property, gleaning all its fading paint and peeling wallpaper. A brand of wind-blasted pottery still clung to its impressive light-colored front wall, but the rest of the house was a mess. In 1940s it was the tallest of the Ohio Statehouse's economic boom, built when it was a thriving center of shipping and commerce. And located just down the hill from abolitionist Rev. John Fessenden's house (a National Historic Landmark), it had probably served as one of the many slave quarters that lay across the river to the left or the underground railroad. While just beyond the river would come the place before it completely succumbed to the ravages of time.

And then the roof caved in.

That's often where the story ends. Fortunately, it's a house that begins. In 2004—almost a decade after part of the roof collapsed onto the second floor (causing the second floor to collapse into the first)—the owner decided to demolish the house and build a new one. After getting word of the decision, White saved for a 30-day reprieve and got the other preservation-minded friends together to form an LLC—a limited liability company—which would hold the historic only for a small amount of money invested in the property—to focus on the endangered house. They replaced the collapsed floors and support beams. Fixed the exterior wood siding and replaced a corner of the roof. Now all they need is a buyer.

The 2,450-square-foot Italianate has three rooms downstairs, off a central hall and two up stairs. The exterior features original papered floors, mantels, and stair balustrade. The kitchen and bathroom were destroyed when the roof collapsed, but the house shook up fairly well water sewer and electricity services. The back yard offers views of the Ohio River and has a two-story outbuilding that may have been a stable located just a few feet from the outside of the Ohio River. After a small renovation with big city accessibility—and the chance to give one of the oldest antebellum houses on the hill—a new owner can



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ABOVE: The facade features deep-set windows. LEFT: The porch is made of Italianate columns. BOTTOM LEFT: The site plan shows the house's location. BOTTOM RIGHT: The original people owned the house in 1850.



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